APPENDIX A: TRAFFIC IMPACT ANALYSIS

HEXAGON TRANSPORTATION CONSULTANTS, INC.

601 California Drive Live/Work Development

Draft Traffic Impact Analysis

Prepared for:

ICF

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Hexagon Transportation Consultants, Inc.
Hexagon Office: 4 North Second Street, Suite 400
San Jose, CA 95113
Hexagon Job Number: 20GB13
Phone: 408.971.6100
Client Name: ICF

Table of Contents

Appendices

List of Tables

List of Figures

Executive Summary

This report presents the results of the Transportation Impact Analysis (TIA) conducted for the proposed live/work development at 601 California Road. The project site is located on the northwest corner of the intersection of California Drive and Floribunda Avenue. The 601 California Drive site is currently occupied by a vacant retail building for a former gas station. As proposed, the project would demolish all existing structures on the project site and construct a new five-story, 25 unit live/work development. The project would provide a total of 25 parking spaces, in an automated puzzle stacker that would be provided at grade level. Vehicle access to the site would be via a single full access driveway on Floribunda Avenue.

This study was conducted for the purpose of identifying the potential transportation impacts related to the proposed development. The potential impacts of the project were evaluated in accordance with the standards set forth by the City of Burlingame and the City/County Association of Governments (C/CAG) of San Mateo County. The C/CAG administers the San Mateo County Congestion Management Program (CMP). Given that the project is expected to add fewer than 100 peak hour trips to CMP roadways (El Camino Real), a C/CAG trip reduction analysis was not prepared. The traffic study includes an analysis of AM and PM peak hour traffic conditions for two (2) signalized intersections and two (2) unsignalized intersections in the vicinity of the project site. The study also includes an analysis of site access and on-site circulation, vehicle queuing, and transit, bicycle, and pedestrian access.

Based on the project description and ITE trip generation rates, the proposed development would generate a total of 136 daily vehicle trips, with 9 trips (2 inbound and 7 outbound) occurring during the AM peak hour and 11 trips (7 inbound and 4 outbound) occurring during the PM peak hour.

The four study intersections were analyzed for level of service under the following five scenarios:

Scenario 1: *Existing Conditions.*

Scenario 2: *Background Conditions.* Background traffic volumes reflect traffic added by projected volumes from approved but not yet completed developments in the project area.

Scenario 3: *Existing plus Project Conditions.* Existing traffic volumes with the project were estimated by adding to existing traffic volumes the additional traffic generated by the project.

Scenario 4: *Project Conditions.* Background traffic volumes with the project (hereafter called project traffic volumes) were estimated by adding to background traffic volumes the additional traffic generated by the project.

Scenario 5: *Background Plus 2 Project Conditions.* A proposed live/work development is also planned at 619 California Drive. Project traffic volumes with the 619 California Drive project were estimated by adding to project traffic volumes the additional traffic generated by the 619 California Drive project.

The results of the intersection level of service analysis are summarized in Table ES-1. The results determined that under all scenarios with and without the project, all of the study intersections would operate in accordance with local standards during both AM and PM peak hours.

Because the project is located within ½ mile of the Burlingame Caltrain Station, it can be presumed to have a less-than-significant impact on VMT based on the Governor's Office of Planning and Research (OPR) guidelines.

This report provides the following recommendations for the project:

- Painted red curb should be provided near the project driveway on the north side of Floribunda Avenue, between California Drive and the existing driveway west of the project. Appropriate visible warning signs and audible warning signals should also be provided at the parking garage entrance to alert pedestrians and bicyclists of vehicles exiting the garage.

Table ES-1
Intersection Levels of Service Summary

#	Intersection	Control*	Peak Hour	Count Date**	Existing Avg. Delay (sec)	Existing LOS	Existing plus Project Avg. Delay (sec)	Existing plus Project LOS	Existing plus Project Incr. in Avg. Delay	Background Avg. Delay (sec)	Background LOS	Background plus Project Avg. Delay (sec)	Background plus Project LOS	Background plus Project Incr. in Avg. Delay	Background plus 2 Projects Avg. Delay (sec)	Background plus 2 Projects LOS	Background plus 2 Projects Incr. in Avg. Delay
1	Oak Grove Avenue & Carolan Avenue	AWSC	AM	05/23/17	14.5	B	14.5	B	0.0	15.2	C	15.3	C	0.1	15.4	C	0.2
			PM	05/23/17	12.3	B	12.3	B	0.0	12.9	B	12.9	B	0.0	12.9	B	0.0
2	Oak Grove Avenue & California Drive	Signalized	AM	04/24/19	18.8	B	18.8	B	0.0	19.6	B	19.6	B	0.0	19.7	B	0.1
			PM	04/24/19	15.2	B	15.2	B	0.0	15.9	B	15.9	B	0.0	16.0	B	0.1
3	Floribunda Avenue & California Drive	TWSC	AM	N/A	15.3	C	15.6	C	0.3	15.4	C	15.6	C	0.2	15.7	C	0.3
			PM	N/A	16.3	C	16.4	C	0.1	16.4	C	16.5	C	0.1	16.5	C	0.1
4	Floribunda Avenue & El Camino Real	Signalized	AM	04/05/16	7.3	A	7.4	A	0.1	7.4	A	7.5	A	0.1	7.5	A	0.1
			PM	04/05/16	7.3	A	7.3	A	0.0	7.5	A	7.5	A	0.0	7.5	A	0.0

Notes:
AWSC = All-Way Stop-Control; TWSC = Two-Way Stop-Control

*Due to limitations within the Synchro software, the intersection of Carolan Avenue and Oak Grove Avenue cannot be evaluated with three stop-controlled approaches and one free-flowing approach. Therefore, the study intersection was evaluated as an all-way stop control intersection to provide a conservative level of service analysis.

**A 1% per year growth factor was applied to escalate the counts to 2020. The traffic counts at the intersection of California Drive and Floribunda Avenue were estimated by using data from the adjacent intersection of California Drive & Oak Grove Avenue.

1. Introduction

This report presents the results of the Transportation Impact Analysis (TIA) conducted for the proposed live/work development at 601 California Road. The project site is located on the northwest corner of the intersection of California Drive and Floribunda Avenue (see Figure 1). The 601 California Drive site is currently occupied by a vacant retail building for a former gas station. As proposed, project would demolish all existing structures on the project site and construct a new five-story, 25 unit live/work development (see Figure 2). The project would provide a total of 25 parking spaces, in an automated puzzle stacker that would be provided at grade level. Vehicle access to the site would be via a single full access driveway on Floribunda Avenue.

Scope of Study

This study was conducted for the purpose of identifying the potential transportation impacts related to the proposed development. The potential impacts of the project were evaluated in accordance with the standards set forth by the City of Burlingame and the City/County Association of Governments (C/CAG) of San Mateo County. The C/CAG administers the San Mateo County Congestion Management Program (CMP). Given that the project is expected to add fewer than 100 peak hour trips to CMP roadways (El Camino Real), a C/CAG trip reduction analysis was not prepared. The traffic study includes an analysis of AM and PM peak hour traffic conditions for two (2) signalized intersections and two (2) unsignalized intersections in the vicinity of the project site. The study also includes an analysis of Vehicle Miles Traveled (VMT), site access and on-site circulation, vehicle queuing, and transit, bicycle, and pedestrian access.

Study Intersections

1. Carolan Avenue and Oak Grove Avenue *
2. California Drive and Oak Grove Avenue
3. California Drive and Floribunda Avenue *
4. El Camino Real and Floribunda Avenue

* Denotes Unsignalized Intersections

Figure 1
Site Location and Study Intersections

NORTH
Not to Scale

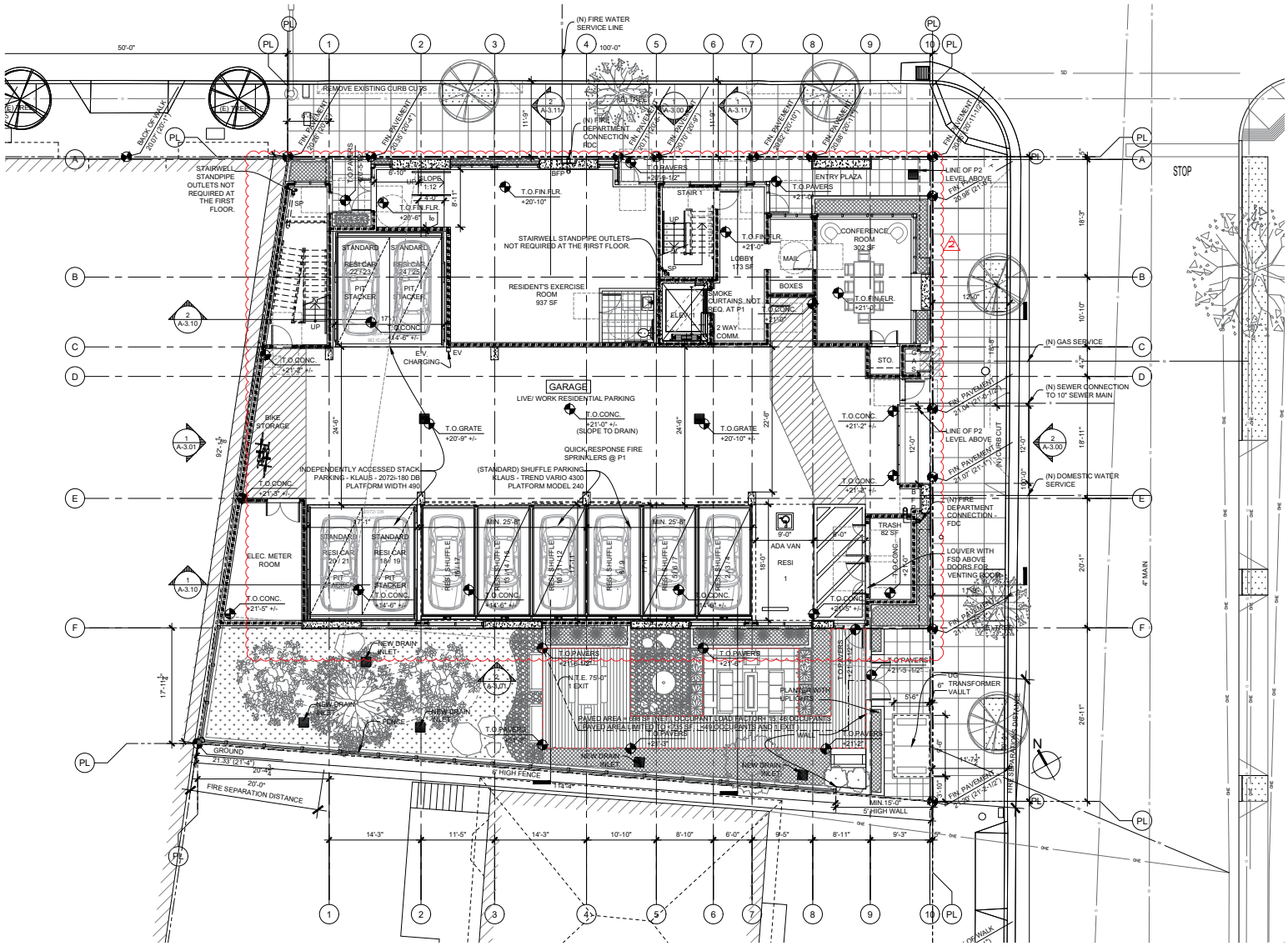

Figure 2
Project Site Plan

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Traffic conditions at the study intersections were analyzed for both the weekday AM and PM peak hours of adjacent street traffic. The AM peak hour typically occurs between 7:00 AM and 9:00 AM and the PM peak hour typically occurs between 4:00 PM and 6:00 PM on a regular weekday. These are the peak commute hours during which most traffic congestion occurs on the roadways in the study area.

Traffic conditions were evaluated for the following scenarios:

Scenario 1: *Existing Conditions.* Due to the COVID-19 pandemic, most businesses and schools are closed, and people are working at home to the extent possible. As a result, traffic volume is a fraction of what it was prior to the virus outbreak. Current traffic counts would not accurately reflect traffic conditions at the completion of the project. Therefore, it is necessary to estimate traffic volume based on older available traffic counts. Existing traffic volumes at the study intersection of El Camino Real & Floribunda Avenue were obtained from traffic counts conducted in April of 2016. Existing traffic volumes at the study intersection of Carolan Avenue & Oak Grove Avenue were obtained from traffic counts conducted in May of 2017. Existing traffic volumes at the study intersection of California Avenue & Oak Grove Avenue were obtained from traffic counts conducted in April of 2019. A 1% per year growth factor was applied to escalate the counts to 2020. The traffic counts at the intersection of California Drive and Floribunda Avenue were estimated by using data from the adjacent intersection of California Drive & Oak Grove Avenue. The study intersections were evaluated with a level of service analysis using Synchro software in accordance with the *2010 Highway Capacity Manual* methodology.

Scenario 2: *Background Conditions.* Background traffic volumes reflect traffic added by projected volumes from approved but not yet completed developments in the project area. The approved project trips and/or approved project information were obtained from the City of Burlingame website.

Scenario 3: *Existing plus Project Conditions.* Existing traffic volumes with the project were estimated by adding to existing traffic volumes the additional traffic generated by the project. Existing plus project conditions were evaluated relative to existing conditions in order to determine the effects the project would have on the existing roadway network.

Scenario 4: *Project Conditions.* Background traffic volumes with the project (hereafter called project traffic volumes) were estimated by adding to background traffic volumes the additional traffic generated by the project. Project Conditions were evaluated relative to background conditions to determine potential project impacts.

Scenario 5: *Background Plus 2 Project Conditions.* A proposed live/work development is also planned at 619 California Drive. Project traffic volumes with the 619 California Drive project were estimated by adding to project traffic volumes the additional traffic generated by the 619 California Drive project. Background Plus 2 Project Conditions were evaluated relative to background conditions to determine potential impacts if both projects are built.

Methodology

This section presents the methods used to determine the traffic conditions for each scenario described above. It includes descriptions of the data requirements, the analysis methodologies, and the applicable level of service standards.

Data Requirements

The data required for the analysis were obtained from previous traffic counts, the City of Burlingame, local traffic studies and EIRs, and field observations. The following data were collected from these sources:

- historical peak-hour intersection turning-movement volumes
- lane configurations
- intersection signal timing and phasing
- approved project trips

Level of Service Standards and Analysis Methodologies

Traffic conditions at the study intersections were evaluated using level of service (LOS). *Level of Service* is a qualitative description of operating conditions ranging from LOS A, or free-flow conditions with little or no delay, to LOS F, or jammed conditions with excessive delays. The various analysis methods are described below.

Signalized Intersections

The City of Burlingame level of service standards were used to evaluate the signalized study intersections. The City of Burlingame evaluates intersection level of service based on the *Highway Capacity Manual* (HCM) *2010* method using Synchro software. The 2010 HCM method evaluates signalized intersection operations on the basis of average control delay time for all vehicles at the intersection. This average delay can then be correlated to a level of service. While the City of Burlingame does not have a Council-adopted level of service threshold, a standard of LOS D or better has typically been applied in local traffic studies and EIRs. The correlation between delay and level of service is shown in Table 1.

Table 1
Signalized Intersection Level of Service Definitions Based on Control Delay

Level of Service	Description	Average Control Delay Per Vehicle (sec.)
A	Signal progression is extremely favorable. Most vehicles arrive during the green phase and do not stop at all. Short cycle lengths may also contribute to the very low vehicle delay.	10.0 or less
B	Operations characterized by good signal progression and/or short cycle lengths. More vehicles stop than with LOS A, causing higher levels of average vehicle delay.	10.1 to 20.0
C	Higher delays may result from fair signal progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, though many still pass through the intersection without stopping.	20.1 to 35.0
D	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable signal progression, long cycle lengths, or high volume-to-capacity (V/C) ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 55.0
E	This is considered to be the limit of acceptable delay. These high delay values generally indicate poor signal progression, long cycle lengths, and high volume-to-capacity (V/C) ratios. Individual cycle failures occur frequently.	55.1 to 80.0
F	This level of delay is considered unacceptable by most drivers. This condition often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the intersection. Poor progression and long cycle lengths may also be major-contributing causes of such delay levels.	greater than 80.0

Source: Transportation Research Board, *2010 Highway Capacity Manual* (Washington, D.C., 2010) p18-6.

Unsignalized Intersections

Level of service analysis at unsignalized intersections is generally used to determine the need for modification in the type of intersection control (i.e., all-way stop or signalization). As part of the evaluation, traffic volumes, delays and traffic signal warrants are evaluated to determine if the existing intersection control is appropriate.

Level of service at unsignalized intersections was based on the 2010 HCM method using the Synchro software. This method is applicable for both side-street and all-way stop-controlled intersections. At side-street stop-controlled intersections, the reported levels of service are reported for the worst stop-controlled approach delay at the intersection. For all-way stop-controlled intersections, a weighted average delay of the entire intersection is presented.

The City of Burlingame does not have a formally-adopted level of service standard for unsignalized intersections. The correlation between average control delay and LOS for unsignalized intersections is shown in Table 2.

Table 2
Unsignalized Intersection Level of Service Definitions Based on Delay

Level of Service	Description	Average Control Delay Per Vehicle (sec.)
A	Little or no traffic delay	10.0 or less
B	Short Traffic delays	10.1 to 15.0
C	Average traffic delays	15.1 to 25.0
D	Long traffic delays	25.1 to 35.0
E	Very long traffic delays	35.1 to 50.0
F	Extreme traffic delays	greater than 50.0

Source: Transportation Research Board, *2010 Highway Capacity Manual* (Washington, D.C., 2010) p20-3.

Traffic Signal Warrant

The level of service calculations at the unsignalized intersections are supplemented with an assessment of the need for installation of a traffic signal, known as a signal warrant analysis. The need for signalization of unsignalized intersections in an urban or suburban context is typically assessed based on the Peak Hour Volume Warrant (Warrant 3) described in the *California Manual on Uniform Traffic Control Devices for Streets and Highways* (CA MUTCD), Part 4, Highway Traffic Signals. This method makes no evaluation of intersection level of service, but simply provides an indication whether vehicular peak hour volumes are, or would be, sufficiently high to justify installation of a traffic signal.

The decision to install a traffic signal should not be based purely on the warrants alone. Instead, the decision should be considered when one or more of the warrants are met, which triggers further feasibility analysis. Engineering judgment should be exercised to determine how a traffic signal could affect collision rates and traffic conditions at the subject intersection, as well as at adjacent intersections. Other options besides a traffic signal should also be considered, such as all-way stop control, new or enhanced signage, or roadway geometry changes; these measures may be more appropriate than a new traffic signal.

Significant Impact Criteria

Pursuant to SB 743, the CEQA 2019 Update Guidelines Section 15064.3, subdivision (b) states that vehicle miles travelled (VMT) will be the metric in analyzing transportation impacts for land use projects for CEQA purposes. The *Technical Advisory on Evaluating Transportation Impacts in CEQA* published by the Governor's Office of Planning and Research (OPR) in December 2018 provides recommendations regarding VMT evaluation methodology, significance thresholds and screening thresholds for land use projects. The following OPR recommendations are relevant to the project:

- OPR recommends that office or residential projects exceeding a level of 15 percent below existing VMT per capita may indicate a significant transportation impact.
- OPR recommends that projects (including office, residential, retail and mixed-use developments) proposed within ½ mile of an existing major transit stop may be presumed to have a less-than-significant impact on VMT.

- OPR recommends that 100 percent affordable residential development in infill locations be presumed to have a less-than-significant impact on VMT.

It should be noted that agencies are not required to adopt VMT analysis guidelines until July 1, 2020. The City of Burlingame, at the time of this report, is undertaking a process of updating its significance thresholds to be consistent with SB 743, but has not released draft thresholds. In the absence of an adopted, or even draft, City policy with numeric thresholds, this study utilized OPR guidelines in analyzing VMT.

Because the project is located within ½ mile of the Burlingame Caltrain Station, it can be presumed to have a less-than-significant impact on VMT based on OPR guidelines.

Intersection Operational Deficiencies

The City of Burlingame does not have Council-adopted definitions of what constitutes an operational deficiency at an intersection. The following standards typically have been used in traffic studies and EIRs. The project is said to create an operational deficiency at a signalized intersection in the City of Burlingame if for any peak-hour:

1. The level of service at the intersection degrades from an acceptable LOS D or better under no project conditions to an unacceptable LOS E or F under project conditions; or

2. The level of service at the intersection is an unacceptable LOS E or F under no project conditions and the addition of project trips causes the average delay at the intersection to increase by five (5) or more seconds.

Report Organization

The remainder of this report is divided into six chapters. Chapter 2 describes the existing roadway network, pedestrian and bicycle facilities, and transit services. Chapter 3 presents the intersection operations under background conditions and describes the approved projects in the City of Burlingame that would likely add traffic to the study area. Chapter 4 describes the methods used to estimate project-generated traffic and its impact on the transportation system. Chapter 5 describes project conditions with the 619 California Drive project. Chapter 6 presents the analysis of other transportation related issues including transit, bicycle, and pedestrian facilities.

2. Existing Conditions

This chapter describes the existing conditions for transportation facilities in the vicinity of the site, including the roadway network, transit service, pedestrian and bicycle facilities, and the existing levels of service for the key intersections in the study area.

Existing Roadway Network

Regional access to the project site is provided via US 101 and El Camino Real (SR 82). Local access to the site is provided by Broadway, Peninsula Avenue, Carolan Avenue, California Drive, Oak Grove Avenue, and Floribunda Avenue. These roadways are described below.

US 101 is a north/south, eight-lane freeway in the vicinity of the site. US 101 extends northward through San Francisco and southward through San Jose. US 101 provides access to and from the project site via a full interchange at Broadway and a partial interchange at Peninsula Avenue.

El Camino Real (SR 82) is a four-lane roadway west of the project site that serves as a north-south route of travel along the Peninsula in the vicinity of the site. El Camino Real extends northward to San Francisco, and southward to San Jose. El Camino Real provides access to and from the project site via Floribunda Avenue.

Broadway is an east/west, two- to four-lane arterial that extends from west of Vancouver Avenue to Old Bayshore Highway, where it transitions into Airport Boulevard. Broadway operates north of the project site, and as one of the main gateways into the city with high volumes and access to other parts to the city. Broadway provides access to and from the project site via California Drive.

Peninsula Avenue is an east/west, two- to three-lane arterial that extends from El Camino Real east to Airport Boulevard, where it transitions into Coyote Point Drive. Peninsula Avenue operates south of the project site and acts as the southern gateway into the city, connecting the downtown Burlingame area with US 101 and El Camino Real. Peninsula Avenue provides access to and from the project site via California Drive.

Carolan Avenue is a north/south roadway that extends from Broadway to Burlingame Avenue. Carolan Avenue consists of one lane in each direction. Carolan Avenue provides access to and from the project site via Oak Grove Avenue.

California Drive is a north/south roadway that extends from Millbrae Avenue in the City of Millbrae to Peninsula Avenue in San Mateo to the south, at which point it becomes North San Mateo Drive.

California Drive consists of two lanes between Millbrae Avenue and Broadway, and four lanes south of Broadway. California Drive provides access to and from the project site via Floribunda Avenue.

Oak Grove Avenue is an east/west roadway that extends from El Camino Real to Rollins Road. California Drive consists of one lane in each direction. Oak Grove Avenue provides access to and from the project site via California Drive.

Floribunda Avenue is an east/west roadway that extends from Eucalyptus Avenue to California Drive. California Drive consists of one lane in each direction. Floribunda Avenue provides direct access to and from the project site.

Existing Pedestrian and Bicycle Facilities

Pedestrian facilities consist of sidewalks, crosswalks, and pedestrian signals at signalized intersections. In the vicinity of the project site, existing sidewalks along the west side of California Drive and both sides of Floribunda Avenue, Ansel Avenue, and Oak Grove Avenue provide pedestrian access to and from the project site. Sidewalks also exist on both sides of El Camino Real north of Floribunda Avenue and on the east side of El Camino Real south of Floribunda Avenue. Marked crosswalks with pedestrian signal heads and push buttons are provided on all approaches of the signalized study intersection of California Avenue and Oak Grove Avenue and on the east and north approaches of the signalized study intersection of El Camino Real and Floribunda Avenue. At the unsignalized study intersections, marked crosswalks are provided along all stop-controlled approaches except at the California Drive/Floribunda Avenue intersection.

Although some sidewalk and crosswalk connections are missing, the overall network of sidewalks and crosswalks in the study area has adequate connectivity and provides pedestrians with safe routes to transit services and other points of interest in the vicinity of the project site.

Existing Bicycle Facilities

Existing bicycle facilities in the project vicinity consist of Class II bicycle lanes and Class III bike routes on some nearby streets. Class II bicycle lanes are lanes on roadways designed for use by bicycles with special lane markings, pavement legends, and signage. Class III bike routes are signed and designated roadways that provide connections to the project site, Class I and Class II bike facilities, as well as parks, schools, other community amenities such as downtown Burlingame, the Burlingame Caltrain Station, and the Millbrae Transit Center. Class II and Class III bike facilities currently exist on the roadway segments listed below and shown on Figure 3.

North-south bicycle connections in the study area include Class III bike routes along California Drive between Millbrae Avenue and Burlingame Avenue and along Primrose Road between Floribunda Avenue and El Camino Real. There are also Class II bike lanes north of the project site along Carolan Avenue between Broadway and Oak Grove Avenue.

East-west bicycle connections in the study area consist of bike routes along Oak Grove Avenue between Acacia Drive and Winchester Drive, Bellevue Avenue between California Drive and El Camino Real, Chapin Avenue between Primrose Road and Occidental Avenue, and Howard Avenue between Occidental Avenue and East Lane. There is also a Class II bike lane along Howard Avenue between East Lane and Humboldt Street.

Although few of the local streets within the project study area have designated bike lanes or are designated as bike routes, many streets in the vicinity of the project site are conducive to bicycle travel due to their low speed limits and traffic volumes.

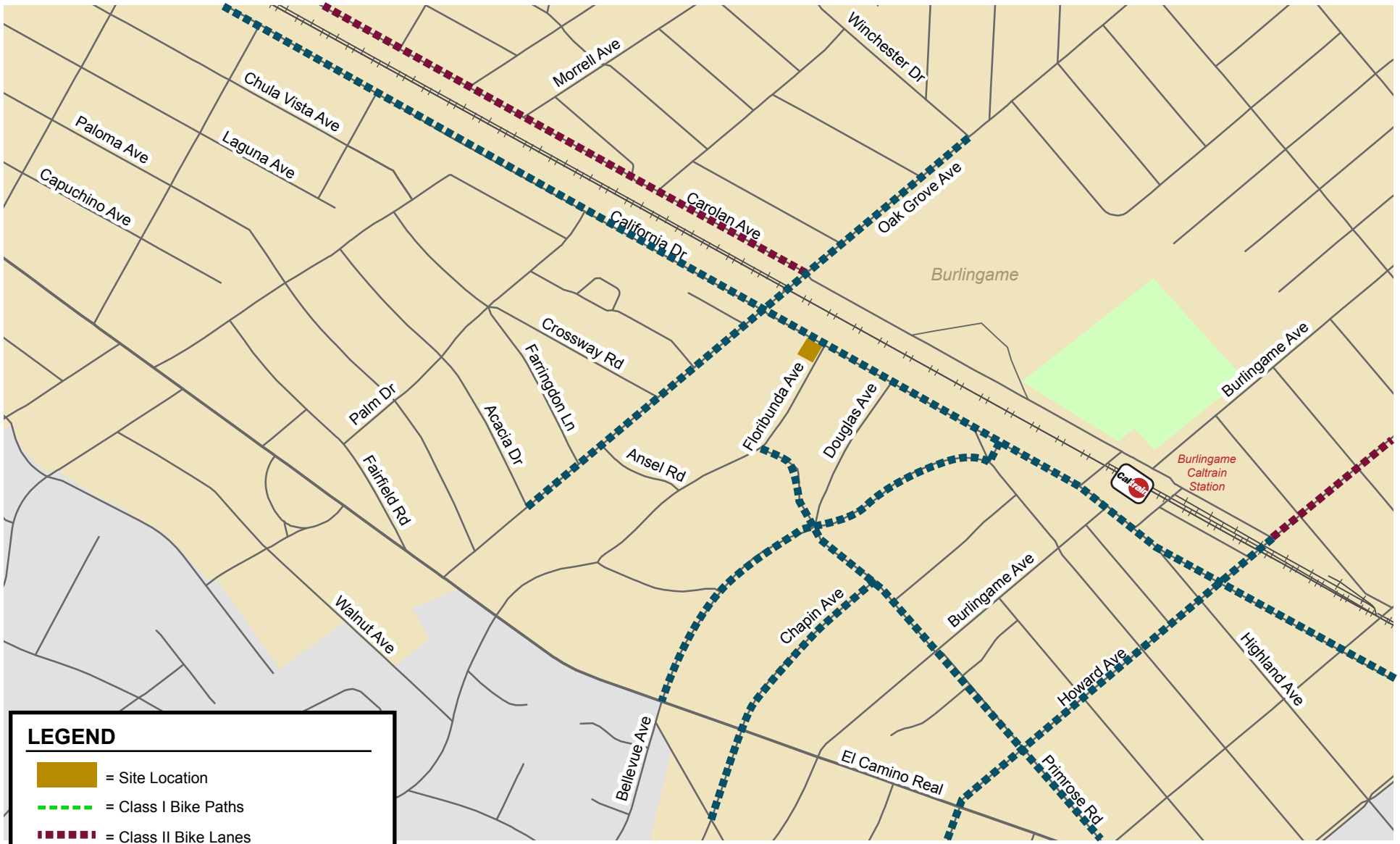


Figure 3
Existing Bicycle Facilties

Existing Transit Service

Existing transit service to the study area is provided by the San Mateo County Transit District (SamTrans), the City of Burlingame, and Caltrain (See Figure 4). The transit service routes that run through the study area are listed in Table 3, including their route description and commute hour headways.

Table 3
Existing Transit Services

Transit Route	Route Description	Headway [1]
Operated by SamTrans		
School-Day Only Route 46	Burlingame Intermediate School to Carolan Ave at 1060	See Footnote [2]
Express Route 292	Hillsdale Shopping Center to Downtown San Francisco	30 mins
Express Route 397	Downtown San Francisco to Palo Alto Transit Center	60 mins[3]
Multi-City Route ECR	Daly City BART Station to Palo Alto Transit Center	15-20 mins
Operated by the City of Burlingame		
Burlingame Trolley Service	Burlingame Caltrain Station to San Francisco Airport Marriott Hotel	45 mins

Notes:
[1] Approximate headways during peak commute periods. Headways shown reflect the schedule prior to COVID-19 reductions.
[2] This route operates with two buses in the Northbound direction in the AM peak hour and two buses in the southbound direction in the school PM hour.
[3] This Route does not operate during the PM.

SamTrans Bus Service

The study area is served directly by three bus routes and one school-day only bus route. The nearest bus stop for Route 46 and Route 292 is located at the California Drive/Oak Grove Avenue intersection, approximately 300 feet walking distance from the project site. The nearest bus stop for Route 397 and Route ECR is located at the El Camino Real/Oak Grove Avenue intersection, approximately 2,300 feet walking distance from the project site.

Caltrain Service

Caltrain provides frequent passenger train service between San Jose and San Francisco seven days a week. During commute hours, Caltrain provides extended service to Morgan Hill and Gilroy. The closest Caltrain station is the Burlingame Station (approximately a quarter-mile south of the project site), providing weekday and weekend service. The Burlingame Station provides local and limited stop Caltrain service. Prior to COVID-19 service reductions, trains that stop at the Burlingame Station operate at approximately 25-minute headways in both directions during the commute hours, with somewhat less frequent service midday. Service operated between about 5:30 AM and 11:35 PM in the northbound direction and between 5:20 AM and 12:35 AM (next day) in the southbound direction.

As part of the Caltrain Modernization Program, the rail service will be electrified. The electrified Caltrain system will provide increased service and is also expected to help accommodate the increase in system ridership through much improved system operations.

Burlingame Trolley Service

The Burlingame Trolley service provides weekday PM peak-hour service between the Burlingame Caltrain Station and the San Francisco Airport Marriott Hotel. The Burlingame Trolley primarily connects the hotels east of Highway 101 with downtown Burlingame. The trolley service operates between 11:50 AM and 9:45 PM, with approximately 45-minute headways. The nearest trolley stop is located near the project site at the California Drive/Burlingame Avenue intersection, approximately a quarter-mile walking distance from the project site.

Existing Intersection Lane Configurations and Traffic Volumes

The existing lane configurations at the study intersections were determined by observations in the field and are shown on Figure 5. Due to the COVID-19 pandemic, most businesses and schools are closed, and people are working at home to the extent possible. As a result, traffic volume is a fraction of what it was prior to the virus outbreak. Current traffic counts would not accurately reflect traffic conditions at the completion of the project. Therefore, it is necessary to estimate traffic volume based on older available traffic counts. Existing traffic volumes at the study intersection of El Camino Real & Floribunda Avenue were obtained from traffic counts conducted in April of 2016. Existing traffic volumes at the study intersection of Carolan Avenue & Oak Grove Avenue were obtained from traffic counts conducted in May of 2017. Existing traffic volumes at the study intersection of California Avenue & Oak Grove Avenue were obtained from traffic counts conducted in April of 2019. A 1% per year growth factor was applied to escalate the counts to 2020. The traffic counts at the intersection of California Drive and Floribunda Avenue were estimated by using data from the adjacent intersection of California Drive & Oak Grove Avenue. The estimated existing peak-hour intersection volumes are shown on Figure 6. Intersection turning-movement counts conducted for this analysis are presented in Appendix A.

Figure 4
Existing Transit Services

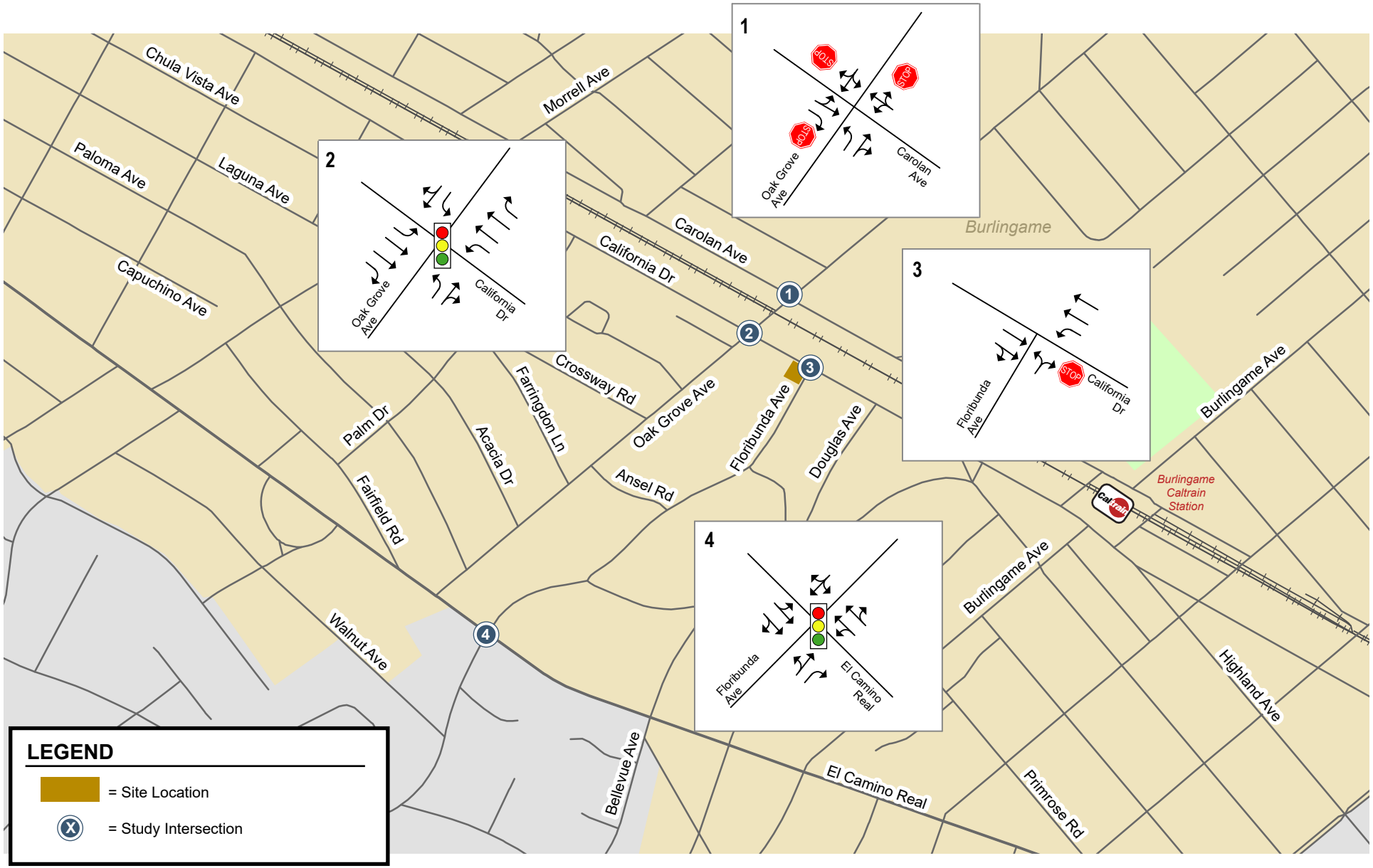


Figure 5
Existing Lane Configurations

NORTH
Not to Scale

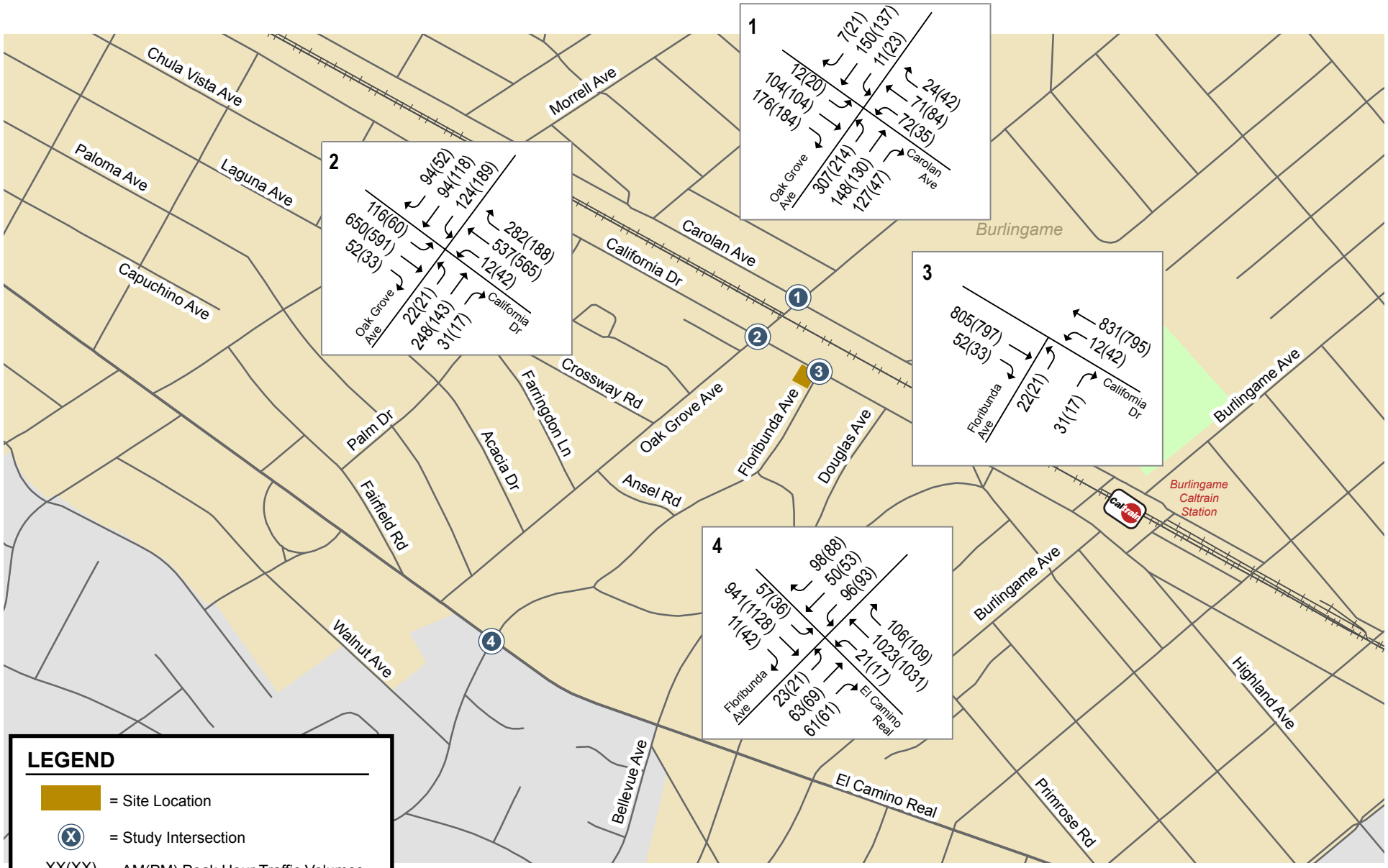


Figure 6
Existing Traffic Volumes

Existing Intersection Levels of Service

The results of the analysis show that both of the signalized study intersections currently operate at an acceptable LOS B or better during the AM and PM peak hours (see Table 4).

The results of the analysis show that both of the unsignalized study intersections currently operate at LOS B or LOS C during the AM and PM peak hours. This indicates that vehicles at the stop-controlled approaches experience only minor or average delays.

The intersection level of service calculation sheets are included in Appendix B.

Table 4
Existing Intersection Levels of Service

#	Intersection	Control*	Peak Hour	Count Date**	Existing Avg. Delay (sec)	Existing Avg. Delay (sec)	Existing LOS
1	Oak Grove Avenue & Carolan Avenue	AWSC	AM	05/23/17	14.5	14.5	B
			PM	05/23/17	12.3	12.3	B
2	Oak Grove Avenue & California Drive	Signalized	AM	04/24/19	18.8	18.8	B
			PM	04/24/19	15.2	15.2	B
3	Floribunda Avenue & California Drive	TWSC	AM	N/A	15.3	15.3	C
			PM	N/A	16.3	16.3	C
4	Floribunda Avenue & El Camino Real	Signalized	AM	04/05/16	7.3	7.3	A
			PM	04/05/16	7.3	7.3	A

Notes:
AWSC = All-Way Stop-Control; TWSC = Two-Way Stop-Control

*Due to limitations within the Synchro software, the intersection of Carolan Avenue and Oak Grove Avenue cannot be evaluated with three stop-controlled approaches and one free-flowing approach. Therefore, the study intersection was evaluated as an all-way stop control intersection to provide a conservative level of service analysis.

**A 1% per year growth factor was applied to escalate the counts to 2020. The traffic counts at the intersection of California Drive and Floribunda Avenue were estimated by using data from the adjacent intersection of California Drive & Oak Grove Avenue.

3. Background Conditions

This chapter describes background traffic conditions. Background conditions are defined as conditions within the next 3-5 years (a horizon year of 2023-2025) just prior to completion/occupation of the proposed development. Traffic volumes for background conditions comprise existing traffic volumes plus traffic generated by other approved developments in the vicinity of the site. This chapter describes the procedure used to determine background traffic volumes and the resulting traffic conditions.

Roadway Network and Traffic Volumes

Under background conditions, it is assumed that the proposed Peninsula Corridor Electrification Project (PCEP), which is a key component of the Caltrain Modernization program, would be completed (projected to be operational between 2022 and 2023). According to Fehr & Peers' *Caltrain Peninsula Corridor Electrification Project Transportation Analysis* (2014), the PCEP is expected to increase service by up to six Caltrain trains per peak hour per direction. The remainder of the transportation network is assumed to be the same under background conditions as that of the existing transportation network.

Background traffic volumes for the study intersections were estimated by adding to existing traffic volumes the trips generated by nearby approved but not yet completed or occupied projects in the area. A list of approved developments was obtained from the City of Burlingame website. The list of background projects is included in Appendix C. Trip generation estimates for the approved projects were based on their respective traffic study, if available. For small projects that did not require a traffic study, trips were estimated based on ITE trip rates. The estimated trips from the approved projects were distributed and assigned throughout the study area based on the trip distribution assumptions present in the traffic studies or based on knowledge of travel patterns in the study area. Background peak hour traffic volumes are shown on Figure 7.

Background Intersection Levels of Service

The results of the analysis show that both of the signalized study intersections would continue to operate at an acceptable LOS B or better during the AM and PM peak hours under background conditions (see Table 5).

The results of the analysis show that both of the unsignalized study intersections would continue to operate at LOS B or LOS C during the AM and PM peak hours under background conditions. This indicates that vehicles at the stop-controlled approaches would experience only minor or average delays.

The intersection level of service calculation sheets are provided in Appendix B.

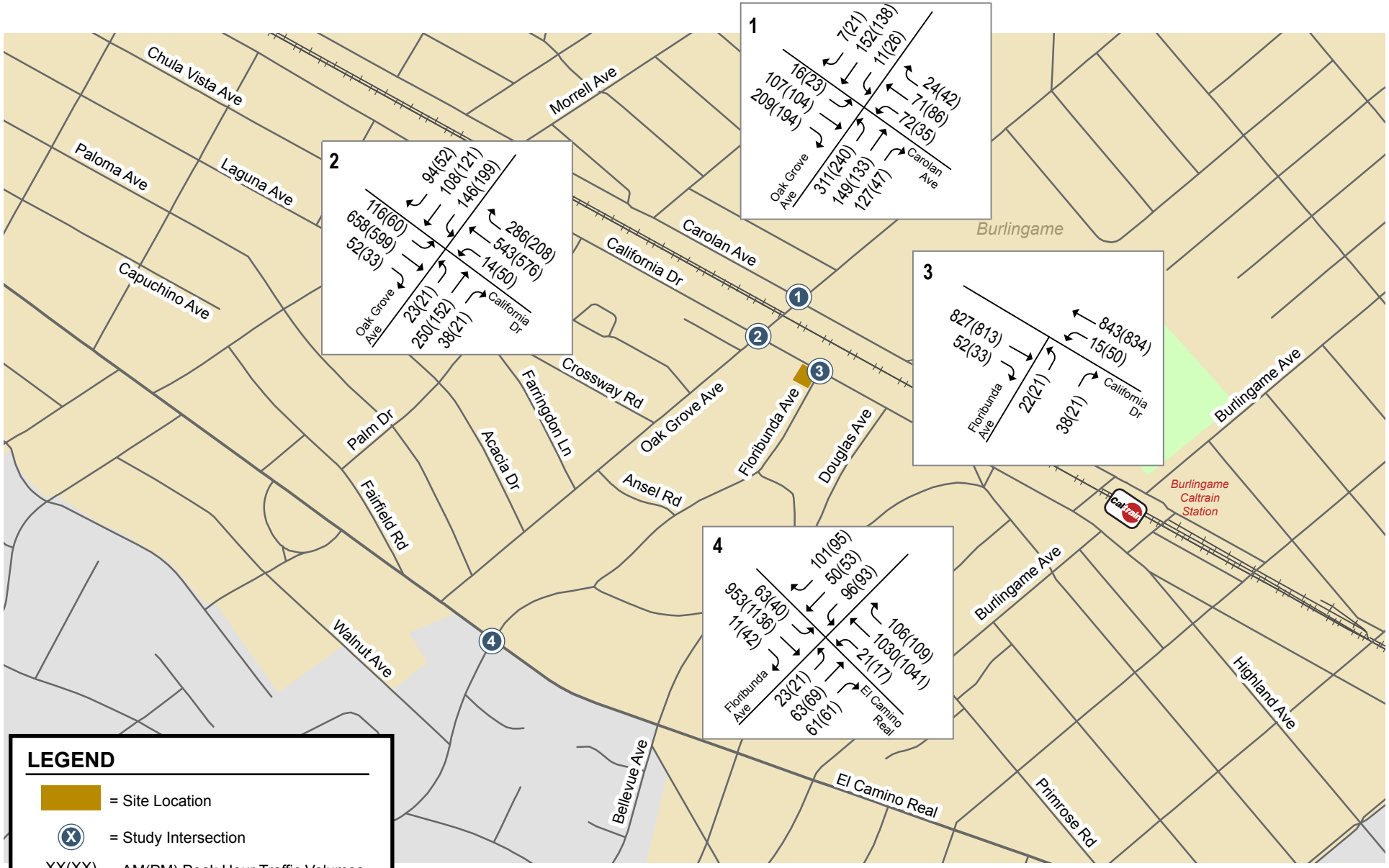


Figure 7
Background Traffic Volumes

Table 5
Background Intersection Levels of Service

#	Intersection	Control*	Peak Hour	Count Date**	Existing Avg. Delay (sec)	Existing Avg. Delay (sec)	Existing LOS	Background Avg. Delay (sec)	Background LOS
1	Oak Grove Avenue & Carolan Avenue	AWSC	AM	05/23/17	14.5	14.5	B	15.2	C
			PM	05/23/17	12.3	12.3	B	12.9	B
2	Oak Grove Avenue & California Drive	Signalized	AM	04/24/19	18.8	18.8	B	19.6	B
			PM	04/24/19	15.2	15.2	B	15.9	B
3	Floribunda Avenue & California Drive	TWSC	AM	N/A	15.3	15.3	C	15.4	C
			PM	N/A	16.3	16.3	C	16.4	C
4	Floribunda Avenue & El Camino Real	Signalized	AM	04/05/16	7.3	7.3	A	7.4	A
			PM	04/05/16	7.3	7.3	A	7.5	A

Notes:
AWSC = All-Way Stop-Control; TWSC = Two-Way Stop-Control

*Due to limitations within the Synchro software, the intersection of Carolan Avenue and Oak Grove Avenue cannot be evaluated with three stop-controlled approaches and one free-flowing approach. Therefore, the study intersection was evaluated as an all-way stop control intersection to provide a conservative level of service analysis.

**A 1% per year growth factor was applied to escalate the counts to 2020. The traffic counts at the intersection of California Drive and Floribunda Avenue were estimated by using data from the adjacent intersection of California Drive & Oak Grove Avenue.

4. Project Conditions

This chapter describes traffic conditions with the project and includes: (1) the method by which project traffic is estimated and (2) a level of service summary. Existing plus project conditions are represented by existing traffic conditions with the addition of traffic generated by the project. Existing plus project traffic conditions could potentially occur if the project were to be occupied prior to the other approved projects in the area. Project conditions are represented by background traffic conditions with the addition of traffic generated by the project.

Roadway Network

It is assumed in this analysis that the transportation network under project conditions would be the same as the background transportation network.

Project Trip Estimates

The magnitude of traffic produced by a new development and the locations where that traffic would appear were estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. In determining project trip generation, the magnitude of traffic traveling to and from the proposed residential development was estimated for the AM and PM peak hours. As part of the project trip distribution, the directions to and from which the project trips would travel were estimated. In the project trip assignment, the project trips were assigned to specific streets and intersections. These procedures are described below.

Trip Generation

Through empirical research, data have been collected that quantify the amount of traffic produced by many types of land uses. The research is compiled in the *Trip Generation Manual, 10th Edition (2017)* published by the Institute of Transportation Engineers' (ITE). The magnitude of traffic added to the roadway system by a particular development is estimated by multiplying the applicable trip generation rates by the size of the development. The average trip generation rates for Multi-Family Housing Mid-Rise (Land Use 221) were applied to the project. Live/work units do not operate the same as regular residential units. Some trips will be made by clients and patrons. However, the trip to work that residents normally would make during peak hours is eliminated due to the in-unit work space. These two factors offset, thus the trip behavior associated with live/work units was assumed to be comparable to that of a traditional residential unit. Based on the project description and ITE trip generation rates, the proposed development would generate a total of 136 daily vehicle trips, with 9 trips (2 inbound and 7 outbound) occurring during the AM peak hour and 11 trips (7 inbound and 4 outbound) occurring during the PM peak hour (see Table 6).

Table 6
Project Trip Generation Estimates

Land Use	Size		Daily Rate	Daily Trips	AM Peak Hour Rate	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour Rate	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total
Proposed Project												
Live/Work Residential [1]	25	units	5.44	136	0.36	2	7	9	0.44	7	4	11
Total Project Trips				**136**		**2**	**7**	**9**		**7**	**4**	**11**

Notes:
ksf = 1,000 square feet
[1] Multifamily Housing (Mid-Rise) (Land Use 221) average rates published in ITE's *Trip Generation Manual, 10th Edition* , 2017.

Trip Distribution and Trip Assignment

The trip distribution pattern for the project was estimated based on existing travel patterns on the surrounding roadway system and the locations of complementary land uses. The peak hour vehicle trips generated by the project were assigned to the roadway network in accordance with the trip distribution pattern. Figure 8 and Figure 9 show the trip distribution pattern and net trip assignment of project traffic on the local transportation network, respectively.

Existing Plus Project Traffic Volumes

Project trips, as represented in the above project trip assignment, were added to existing traffic volumes to obtain existing plus project traffic volumes. The existing plus project traffic volumes are shown on Figure 10.

Existing Plus Project Intersection Analysis

The results of the analysis show that both of the signalized study intersections would continue to operate at an acceptable LOS B or better during the AM and PM peak hours under existing plus project conditions (see Table 7).

The results of the analysis show that both of the unsignalized study intersections would continue to operate at LOS B or LOS C during the AM and PM peak hours under existing plus project conditions. This indicates that, with the addition of project traffic under existing conditions, vehicles at the stop-controlled approaches are expected to continue to experience only minor or average delays.

The intersection level of service calculation sheets are provided in Appendix B.

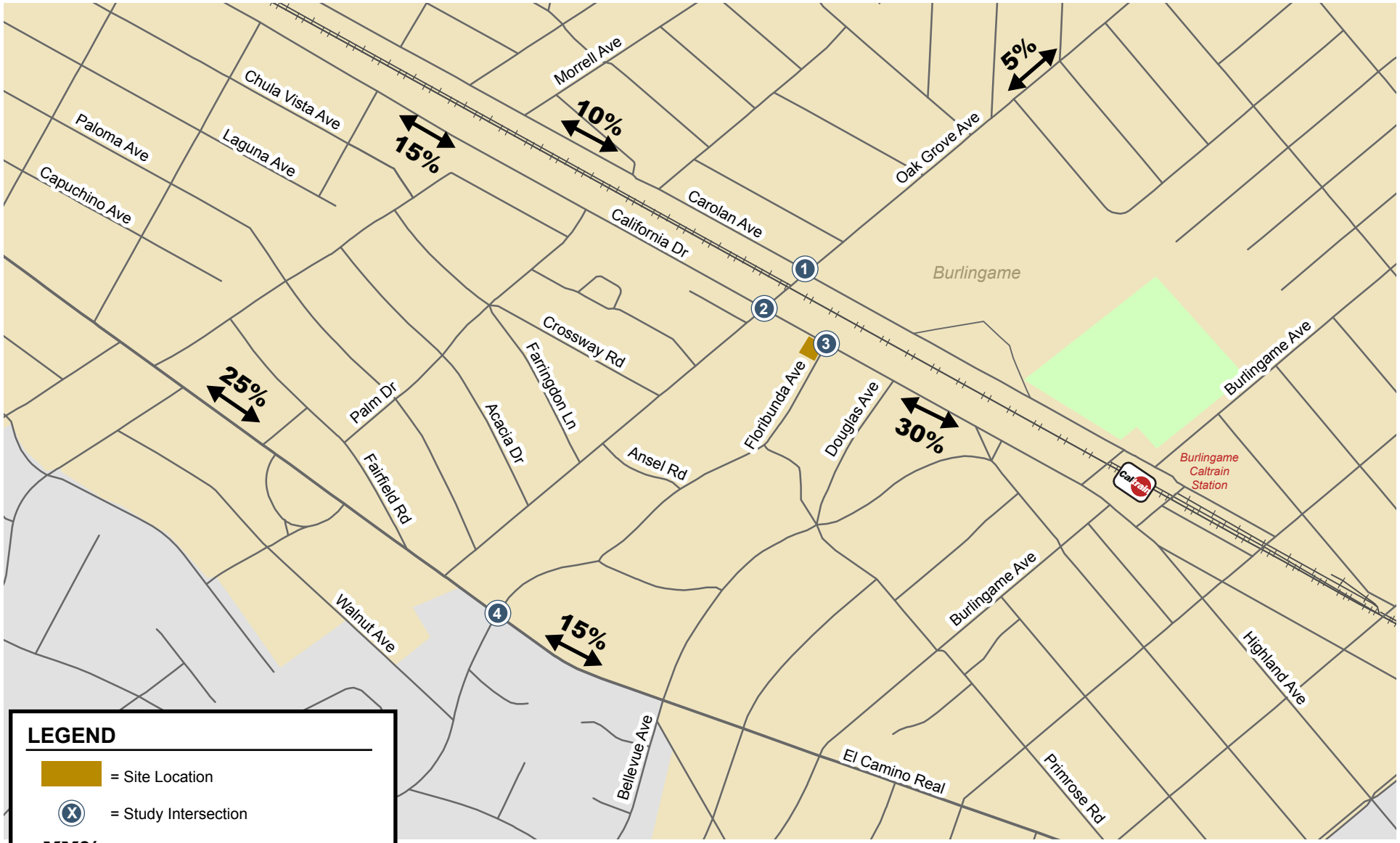


Figure 8
Project Trip Distribution

Figure 9
Project Trip Assignment

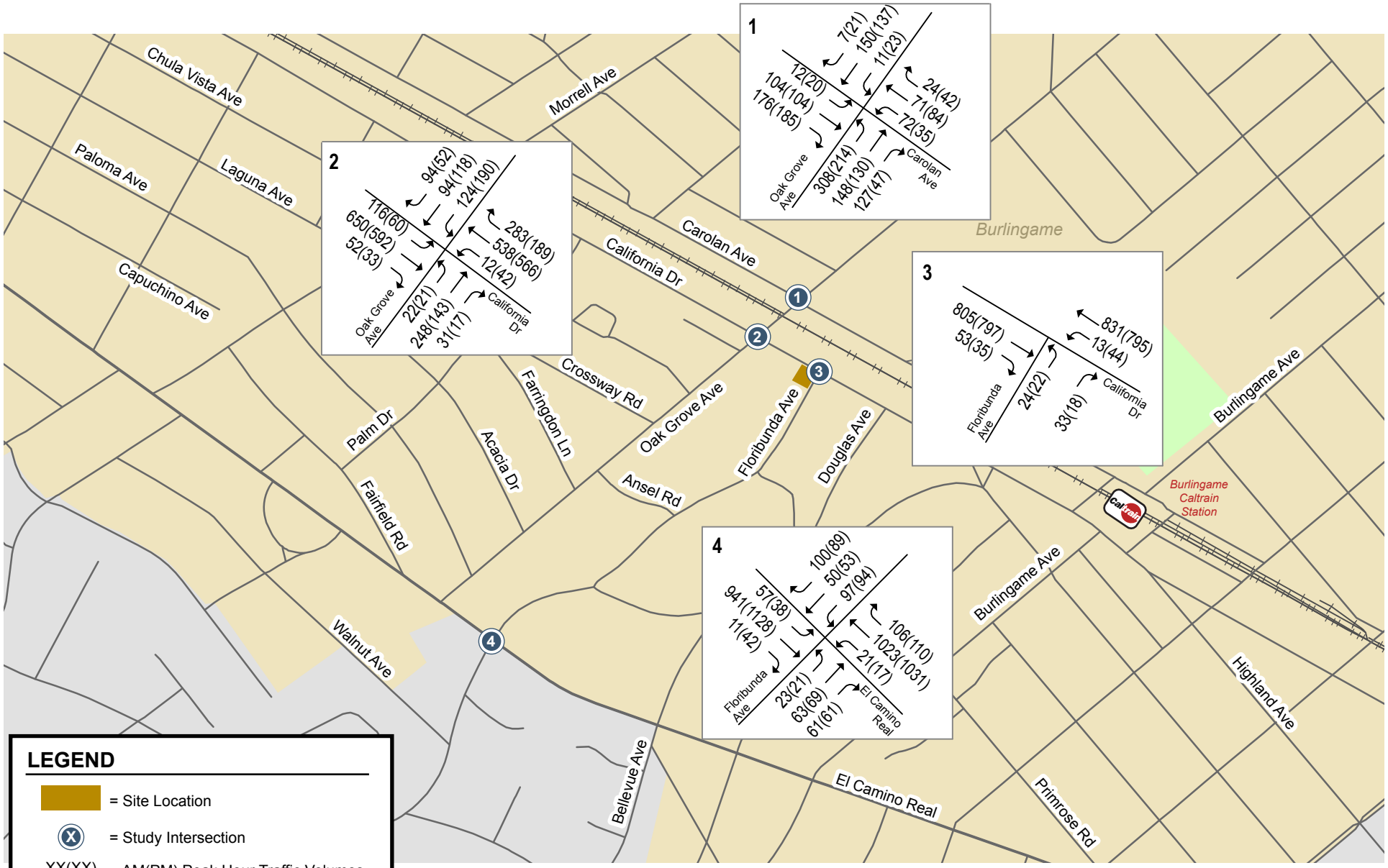


Figure 10
Existing Plus Project Traffic Volumes

Table 7
Existing Plus Project Intersection Levels of Service

#	Intersection	Control*	Peak Hour	Count Date**	Existing Avg. Delay (sec)	Existing Avg. Delay (sec)	Existing LOS	Existing plus Project Avg. Delay (sec)	Existing plus Project LOS	Existing plus Project Incr. in Avg. Delay
1	Oak Grove Avenue & Carolan Avenue	AWSC	AM	05/23/17	14.5	14.5	B	14.5	B	0.0
			PM	05/23/17	12.3	12.3	B	12.3	B	0.0
2	Oak Grove Avenue & California Drive	Signalized	AM	04/24/19	18.8	18.8	B	18.8	B	0.0
			PM	04/24/19	15.2	15.2	B	15.2	B	0.0
3	Floribunda Avenue & California Drive	TWSC	AM	N/A	15.3	15.3	C	15.6	C	0.3
			PM	N/A	16.3	16.3	C	16.4	C	0.1
4	Floribunda Avenue & El Camino Real	Signalized	AM	04/05/16	7.3	7.3	A	7.4	A	0.1
			PM	04/05/16	7.3	7.3	A	7.3	A	0.0

Notes:
AWSC = All-Way Stop-Control; TWSC = Two-Way Stop-Control

*Due to limitations within the Synchro software, the intersection of Carolan Avenue and Oak Grove Avenue cannot be evaluated with three stop-controlled approaches and one free-flowing approach. Therefore, the study intersection was evaluated as an all-way stop control intersection to provide a conservative level of service analysis.

**A 1% per year growth factor was applied to escalate the counts to 2020. The traffic counts at the intersection of California Drive and Floribunda Avenue were estimated by using data from the adjacent intersection of California Drive & Oak Grove Avenue.

Project Condition Traffic Volumes

Project trips, as represented in the above project trip assignment, were added to background traffic volumes to obtain project condition traffic volumes. The project condition traffic volumes at the study intersections are shown on Figure 11.

Project Condition Intersection Analysis

The results of the analysis show that both of the signalized study intersections would continue to operate at an acceptable LOS B or better during the AM and PM peak hours under project conditions (see Table 8).

The results of the analysis show that both of the unsignalized study intersections would continue to operate at LOS B or LOS C during the AM and PM peak hours under project conditions. This indicates that, with the addition of project traffic under background conditions, vehicles at the stop-controlled approaches are expected to continue to experience only minor or average delays.

Intersection level of service calculation sheets are provided in Appendix B.

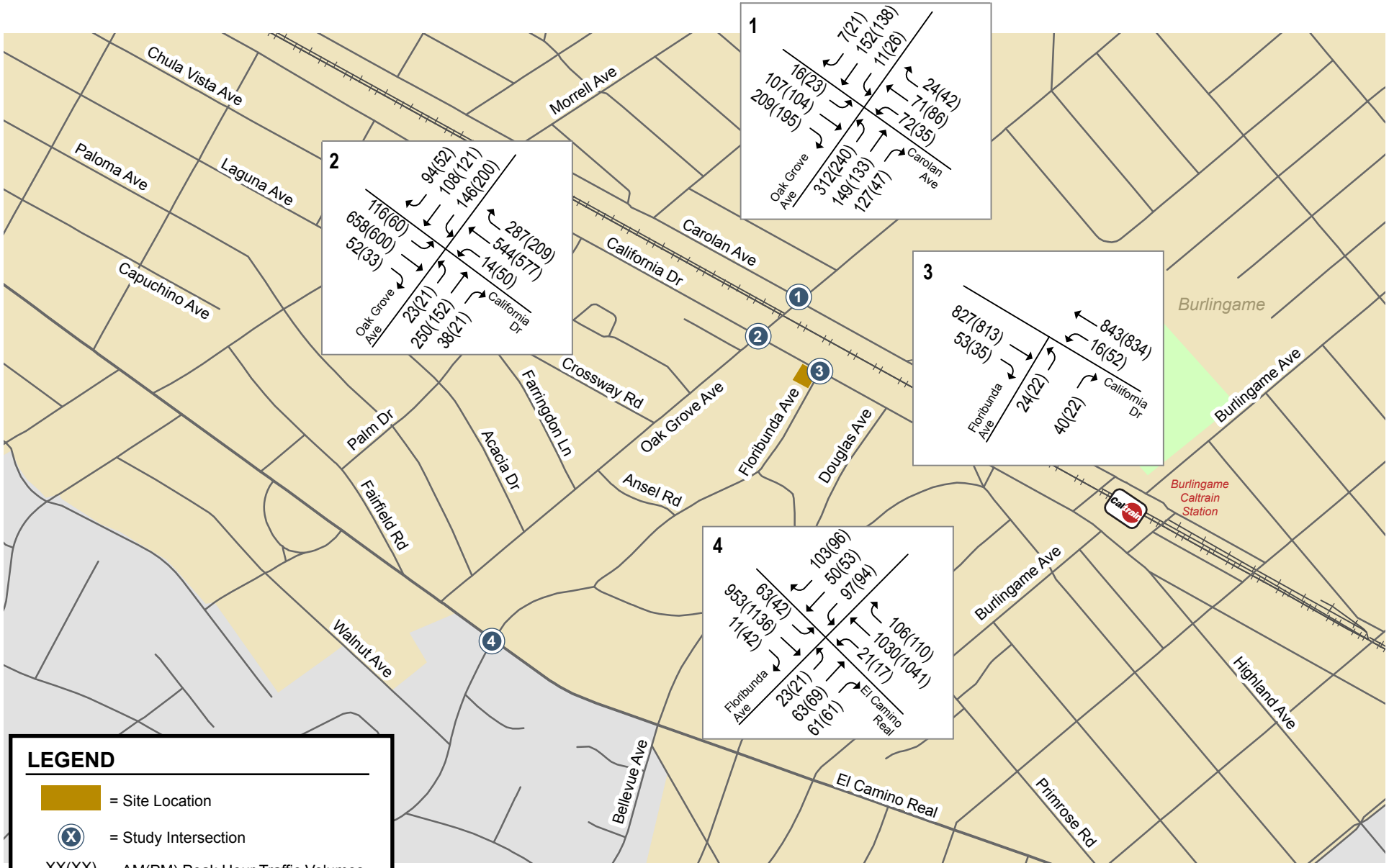


Figure 11
Background Plus Project Traffic Volumes

Table 8
Background Plus Project Intersection Levels of Service

#	Intersection	Control*	Peak Hour	Count Date**	Existing Avg. Delay (sec)	Background Avg. Delay (sec)	Background LOS	Background plus Project Avg. Delay (sec)	Background plus Project LOS	Background plus Project Incr. in Avg. Delay
1	Oak Grove Avenue & Carolan Avenue	AWSC	AM	05/23/17	14.5	15.2	C	15.3	C	0.1
			PM	05/23/17	12.3	12.9	B	12.9	B	0.0
2	Oak Grove Avenue & California Drive	Signalized	AM	04/24/19	18.8	19.6	B	19.6	B	0.0
			PM	04/24/19	15.2	15.9	B	15.9	B	0.0
3	Floribunda Avenue & California Drive	TWSC	AM	N/A	15.3	15.4	C	15.6	C	0.2
			PM	N/A	16.3	16.4	C	16.5	C	0.1
4	Floribunda Avenue & El Camino Real	Signalized	AM	04/05/16	7.3	7.4	A	7.5	A	0.1
			PM	04/05/16	7.3	7.5	A	7.5	A	0.0

Notes:
AWSC = All-Way Stop-Control; TWSC = Two-Way Stop-Control

*Due to limitations within the Synchro software, the intersection of Carolan Avenue and Oak Grove Avenue cannot be evaluated with three stop-controlled approaches and one free-flowing approach. Therefore, the study intersection was evaluated as an all-way stop control intersection to provide a conservative level of service analysis.

**A 1% per year growth factor was applied to escalate the counts to 2020. The traffic counts at the intersection of California Drive and Floribunda Avenue were estimated by using data from the adjacent intersection of California Drive & Oak Grove Avenue.

5. Background Plus 2 Project Conditions

This chapter presents a summary of the traffic conditions that would occur under project conditions with the completion of the adjacent 619 California Drive Project, which would consist of 44 live/work units.

Background Plus 2 Project Traffic Volumes

Project trips for the 619 California Drive project were added to the project traffic volumes to obtain background plus 2 project traffic volumes (See 619 California Drive TIA). The project trip generation estimates were obtained from the trip generation table from the 619 California Drive traffic study, shown on Table 9 below. The background plus 2 project traffic volumes are shown on Figure 12.

Table 9
619 California Drive Trip Generation Estimates

			Daily		AM Peak Hour				PM Peak Hour			
Land Use	**Size**		**Rate**	**Trips**	**Rate**	**In**	**Out**	**Total**	**Rate**	**In**	**Out**	**Total**
Proposed Project												
Live/Work Residential [1]	44	units	5.44	239	0.36	4	12	16	0.44	12	7	19
Existing Use												
Automobile Shop [2]	6.00	ksf		(15)		0	(1)	(1)		(1)	(1)	(2)
Single-Family Residential [3]	2	units	9.44	(19)	0.74	0	(1)	(1)	0.99	(1)	(1)	(2)
General Office Building [4]	3	employees	3.28	(10)	0.37	(1)	0	(1)	0.40	0	(1)	(1)
Total Existing Trips				**(44)**		**(1)**	**(2)**	**(3)**		**(2)**	**(3)**	**(5)**
Net Project Trips				**195**		**3**	**10**	**13**		**10**	**4**	**14**

Notes:

ksf = 1,000 square feet

[1] Multifamily Housing (Mid-Rise) (Land Use 221) average rates published in ITE's *Trip Generation Manual, 10th Edition* , 2017.

[2] Based on driveway counts conduted on January 11, 2018. Daily trips reductions are the average of the AM and PM peak hour rate multiplied by 10.

[3] Single-Family Detached Housing (Land Use 210) average rates published in ITE's *Trip Generation Manual, 10th Edition,* 2017.

[4] General Office Building (Land Use 710) average rates published in ITE's *Trip Generation Manual, 10th Edition,* 2017.

Intersection Levels of Service Analysis

The results of the analysis show that both of the signalized study intersections would continue to operate at an acceptable LOS B or better during the AM and PM peak hours under background plus 2 project conditions (see Table 10).

The results of the analysis show that both of the unsignalized study intersections would continue to operate at LOS B or LOS C during the AM and PM peak hours under background plus 2 project conditions. This indicates that, with the addition of project traffic from both projects under background conditions, vehicles at the stop-controlled approaches are expected to continue to experience only minor or average delays.

Level of service calculation sheets are included in Appendix B.

Figure 12
Background Plus 2 Projects Traffic Volumes

Table 10
Background Plus 2 Project Levels of Service Summary

#	Intersection	Control*	Peak Hour	Count Date**	Existing Avg. Delay (sec)	Existing LOS	Background Plus 2 Projects Avg. Delay (sec)	Background Plus 2 Projects LOS
1	Oak Grove Avenue & Carolan Avenue	AWSC	AM	05/23/17	14.5	B	15.4	C
			PM	05/23/17	12.3	B	12.9	B
2	Oak Grove Avenue & California Drive	Signalized	AM	04/24/19	18.8	B	19.7	B
			PM	04/24/19	15.2	B	16.0	B
3	Floribunda Avenue & California Drive	TWSC	AM	N/A	15.3	C	15.7	C
			PM	N/A	16.3	C	16.5	C
4	Floribunda Avenue & El Camino Real	Signalized	AM	04/05/16	7.3	A	7.5	A
			PM	04/05/16	7.3	A	7.5	A

Notes:
AWSC = All-Way Stop-Control; TWSC = Two-Way Stop-Control

*Due to limitations within the Synchro software, the intersection of Carolan Avenue and Oak Grove Avenue cannot be evaluated with three stop-controlled approaches and one free-flowing approach. Therefore, the study intersection was evaluated as an all-way stop control intersection to provide a conservative level of service analysis.

**A 1% per year growth factor was applied to escalate the counts to 2020. The traffic counts at the intersection of California Drive and Floribunda Avenue were estimated by using data from the adjacent intersection of California Drive & Oak Grove Avenue.

6. Other Transportation Issues

This chapter presents other transportation issues associated with the project. These include an analysis of:

- Project site access and circulation
- Truck access and circulation
- Parking analysis
- Signal warrant analysis
- Potential impacts to pedestrian, bicycle, and transit facilities

Unlike the level of service impact methodology, most of the analyses in this chapter are based on professional judgement in accordance with the standards and methods employed by traffic engineering professionals. Although operational issues are not considered CEQA impacts, they do describe traffic conditions that are relevant to describing the project environment.

Site Access and On-Site Circulation

The site access and on-site circulation evaluation is based on the January 17, 2020 site plan prepared by Ian Birchall and Associates (see Figure 2). Site access was evaluated to determine the adequacy of the site's driveway with regard to the following: traffic volume, delays, vehicle queues, geometric design, and corner sight distance. On-site vehicular circulation was reviewed in accordance with generally accepted traffic engineering standards and transportation planning principles.

Project Driveway Design

Vehicular access to the project site would be provided via a single full-access driveway on Floribunda Avenue. The project driveway is shown to be 12 feet wide and would provide access to the residential parking garage. The City of Burlingame Zoning Code requires a minimum of 12-foot driveways for parking areas with not more than 30 vehicle spaces. Therefore, the project would meet the City's minimum width requirement for a two-way driveway.

The project driveway must provide adequate access and storage space for vehicles entering the parking garage to avoid backups onto the sidewalks and streets. The full-access driveway on Floribunda Avenue would provide enough stacking space for approximately one inbound vehicle Based on the low number of peak hour trips generated by the proposed residential development, stacking space for one inbound vehicle would be adequate.

Nearby Driveways and Intersections

The location of the project driveway was also reviewed with respect to other driveways and intersections in the vicinity of the project. A nearby driveway is located approximately 50 feet west of the project driveway, and the intersection of California Drive and Floribunda Avenue is located approximately 50 feet east of the project driveway. While the project driveway would be close in proximity to the adjacent driveway and the adjacent intersection, vehicles are still expected to be able to make turns in and out of the project driveway without affecting similar operations at the adjacent driveway and the adjacent intersection because of the small number of trips that the project would generate. Therefore, the driveway location as proposed was found to be adequate. However, adequate sight distance needs to be provided at the project driveway to ensure vehicles at the adjacent driveway are within the line of sight. Sight distance at the project driveway is described below.

Sight Distance

Adequate sight distance (sight distance triangles) should be provided at the project driveway in accordance with Caltrans standards. Sight distance triangles should be measured approximately 10 feet back from the traveled way. Providing the appropriate sight distance reduces the likelihood of a collision at a driveway or intersection and provides drivers with the ability to exit a driveway or locate sufficient gaps in traffic. The minimum acceptable sight distance is often considered the Caltrans stopping sight distance. Sight distance requirements vary depending on the roadway speeds. For the driveway on Floribunda Avenue, which has a posted speed limit of 25 mph, the Caltrans stopping sight distance is 200 feet (based on a design speed of 30 mph). Thus, a driver must be able to see 200 feet in both directions along Floribunda Avenue in order to stop and avoid a collision.

Based on the project site plan, the project driveway is located 50 feet from the intersection of California Drive and Floribunda Avenue, which is a T-intersection. However, vehicles turning onto Floribunda Avenue would not be moving at 30 mph, which will result in a shorter required sight distance. The project driveway would have at least 200 feet of sight distance to the west without the on-street parking adjacent to the driveway. Therefore, the project should prohibit on-street parking between California Drive and the western neighboring driveway on the north side of Floribunda Avenue, and it can be concluded that the project driveway would meet the Caltrans minimum stopping sight distance standards.

Project Driveway Operations

The project-generated trips that are estimated to occur at the project driveway are 2 inbound trips and 7 outbound trips during the AM peak hour, and 7 inbound trips and 4 outbound trips during the PM peak hour. Based on the relatively low traffic volumes near the project site, vehicle queues are not expected to occur during peak hours.

The project driveway would provide full access, allowing right and left inbound and outbound turns onto Floribunda Avenue. The project driveway is not wide enough to accommodate inbound and outbound traffic simultaneously. Inbound vehicles would need to wait for outbound vehicles to finish exiting, and vice versa. Outbound left turns from the project driveway would require vehicles to wait for gaps in both the eastbound and westbound traffic, while inbound left turns would require vehicles to wait for a gap in the westbound traffic flow only. Given that Floribunda Avenue consists of only one lane in each direction with no left-turn pockets, left turns would be made from the through lane. Thus, there would be interruptions to the through traffic flow while left-turn vehicles wait for a gap in the on-coming traffic flow, albeit momentary. Based on the project's trip generation, on average, vehicles would either enter or exit the site once every 5-7 minutes. This indicates that left-turning vehicles at the project driveway would experience minor delays and are expected to have a minimal effect on operations at the adjacent intersections.

The project would remove two existing driveways along California Drive, which would benefit vehicle and pedestrian circulation along California Drive.

On-Site Circulation

On-site vehicular circulation was reviewed in accordance with the City of Burlingame Zoning Code and generally accepted traffic engineering standards. Generally, the proposed plan would provide vehicle traffic with adequate maneuvering space. The project would provide 90-degree parking stalls in mechanical shuffle parking systems. The City's standard minimum width for two-way drive aisles is 24 feet wide where 90-degree parking is provided. This allows sufficient room for vehicles to back out of the parking spaces. According to the site plan, the drive aisles throughout the parking garage measure 24 feet wide. Thus, adequate access to all parking stalls would be provided throughout the site.

Parking Garage Circulation

Based on the project site plan, the parking garage shows a single two-way drive aisle, which provides adequate space for passenger vehicles to turn around within the garage.

The parking spaces would consist of a mechanical shuffle lift and pit lift parking systems. Comprised of multiple parking spaces, the vehicle mechanical parking systems would present an open parking stall, that once occupied would automatically shift, presenting additional open stalls. This system would also allow residents to retrieve their vehicle without the need to move the accompanying vehicles. Therefore, vehicle queues throughout the parking garage are expected to be minimal and not result in backups that extend onto Floribunda Avenue.

Parking Stall Dimensions

According to the project site plan, the project proposes standard-sized (8.5 feet wide by 18 feet long) stalls, which would meet the City's off-street parking design standard. Van accessibility is provided at the single ADA accessible stall location.

The City of Burlingame Zoning Code does not include standards for mechanical shuffle parking systems. However, it should also be noted that the project proposes to use the Klaus 2072i-180 DB parking system and the Klaus TrendVario 4300 Model 240 Multiparking system. Both systems would allow the vehicle stackers to accommodate passenger cars, trucks, as well as SUVs and vans.

Bike and Pedestrian On-site Circulation

The project plan provides adequate pedestrian circulation on site, as well as between the site and the surrounding pedestrian facilities. The project would rebuild the sidewalks along the project frontage along California Drive and along Floribunda Avenue. Continuous walkways would also be provided along the project frontage.

The parking garage would include one stair and an elevator so that pedestrians would have convenient access to the parking areas. As shown on Figure 2, all of the residential bicycle parking would be located on the ground floor in the garage. This would allow bicyclists to enter and leave the project site through the garage entrance/exit and connect to the bike route along California Drive.

Truck Access and Circulation

In accordance with the City's Zoning Code (Section 26.30.070(a)), condominium uses within a commercial district are not required to provide off-street loading/unloading spaces for delivery/service vehicles. Therefore, the proposed project is not required to provide any loading spaces.

Garbage Collection

The site plan shows one on-site trash room located at the southwest corner of the ground-level parking garage. Due to access limitations, garbage collection activities for the project should not occur on-site due to height and access limitations. The trash bins also should be removed from the public right-of-way immediately after garbage pickup as to not impact AM or PM peak hour traffic conditions.

Construction Activities

Typical activities related to the construction of any development could include lane narrowing and/or lane closures, sidewalk and pedestrian crosswalk closures, and bike lane closures. In the event of any type of closure, clear signage (e.g., closure and detour signs) must be provided to ensure vehicles, pedestrians and bicyclists are able to adequately reach their intended destinations safely. As a standard condition of approval required by the City, the project would be required to submit a construction management plan for City approval that addresses schedule, closures/detours, staging, parking, and truck routes.

Parking Analysis

The City of Burlingame Zoning Code (Section 25.70.032) states that residential uses within the Burlingame Downtown Specific Plan Area are to provide parking as follows: 1.0 parking space per studio and one-bedroom unit. The project as proposed would provide up to 25 one-bedroom live/work units. Based on the City's parking requirements and the current project description, the project would be required to provide 25 parking spaces.

Based on the project site plan dated January 17, 2020, the parking garage would provide a total of 25 parking spaces. Therefore, the proposed parking supply would meet the City's Parking Code

Per the California Building Code (CBC) Table 11B-208.2, one (1) ADA accessible spaces is required for projects with 25 or fewer parking spaces. The required ADA accessible parking space must also be van accessible space. The plans show the required van accessible space. Thus, the project adheres to the CBC accessible parking provisions.

Bicycle Parking

The City of Burlingame municipal code does not include standards for bicycle parking. However, the project site plan shows a bicycle storage area in the parking garage. Bicyclists would enter the garage via the pedestrian gate adjacent to the vehicular gate.

Signal Warrant Analysis

Signal warrant checks (California *MUTCD, Section 4, Warrant 3 Part B*) were performed for the unsignalized study intersections. The results of the signal warrant analysis are described and summarized below. Signal warrant worksheets and threshold tables are included in Appendix D.

A peak hour signal warrant analysis was performed for the unsignalized study intersections of California Drive and Floribunda Avenue and of Carolan Avenue and Oak Grove Avenue, based on the peak-hour traffic volumes. The intersection of California Drive and Floribunda Avenue would not warrant signalization under any traffic scenario with or without the project. The intersection of Carolan Avenue and Oak Grove Avenue would not warrant signalization in any of the PM peak hour scenarios; however, the intersection would warrant signalization in all of the AM peak hour scenarios, including existing

conditions. Because the intersection would operate an acceptable LOS C or better in all scenarios during the AM and PM peak hours, and due to the intersection's proximity to the railroad, it is not recommended that a traffic signal be installed at this intersection.

Pedestrian, Bicycle, and Transit Analysis

All new development projects in the City of Burlingame should encourage multi-modal travel, consistent with the goals of the City's General Plan. It is the goal of the General Plan that all development projects accommodate and encourage the use of non-automobile transportation modes to achieve Burlingame's mobility goals. In addition, the adopted Bicycle Transportation Plan establishes goals and policies to make bicycling a daily part of life in Burlingame. The Transportation Plan includes designated bike lanes where possible, as well as designated routes for both local and regional trips, to provide a complete connection through Burlingame. In order to further the goals of the City, pedestrian and bicycle facilities should be encouraged with new development projects.

Pedestrian Facilities

Pedestrian facilities in the study area consist of sidewalks, crosswalks, and pedestrian signals at signalized intersections (see Chapter 2 for details). The project is expected to increase the number of pedestrians using the sidewalks and crosswalks. Project plans show existing sidewalks of approximately 12 feet in width along its California Drive and Floribunda Avenue frontages. Although some sidewalk and crosswalk connections are missing in the study area, the overall network of sidewalks and crosswalks in the vicinity of the project site has adequate connectivity and provides pedestrians with safe routes to transit services and other points of interest. Note that the project would not remove any pedestrian facilities, nor would it conflict with any adopted plans or policies for new pedestrian facilities.

Bicycle Facilities

There are some bike facilities in the immediate vicinity of the project site (see Chapter 2 for details). Bicycles are also allowed on Caltrain and BART. The Burlingame Station is served by Caltrain (approximately a quarter-mile south of the project site), while the Millbrae Station is served by Caltrain and BART (located about two and a half miles from the project site). There are bicycle racks and bicycle lockers available at both transit stations.

The project would not remove any bicycle facilities, nor would it conflict with any adopted plans or policies for new bicycle facilities.

Transit Services

The project study area is well-served by SamTrans, Caltrain, and the Burlingame Trolley (see Chapter 2 for details). The project would generate about 9 person-trips during the AM peak hour and 11 person-trips during the PM peak hour. Given the project site's proximity to transit services, it could be expected that a portion of residents' trips would be made by transit. Assuming up to 10% of the total trips are made by transit, that translates into a maximum of about 1 new transit rider during the peak hours. It is assumed that the transit services in the project study area have sufficient capacity to accommodate this minor increase in ridership.

The project would not remove any transit facilities, nor would it conflict with any adopted plans or policies associated with new transit facilities.

Future Transit Services

As previously mentioned, the Peninsula Corridor Electrification Project (PCEP) is expected to increase service by up to six Caltrain trains per peak hour per direction. With the proposed electrification project, it is expected that the transit ridership at the Burlingame Station will increase. Given the nearby Caltrain station, development of this residential project would result in new transit riders, thus reducing vehicle trips. The Burlingame Station is within walking distance (approximately a quarter-mile south of the project site).

601 California Drive Live/Work Development TIA

Technical Appendices

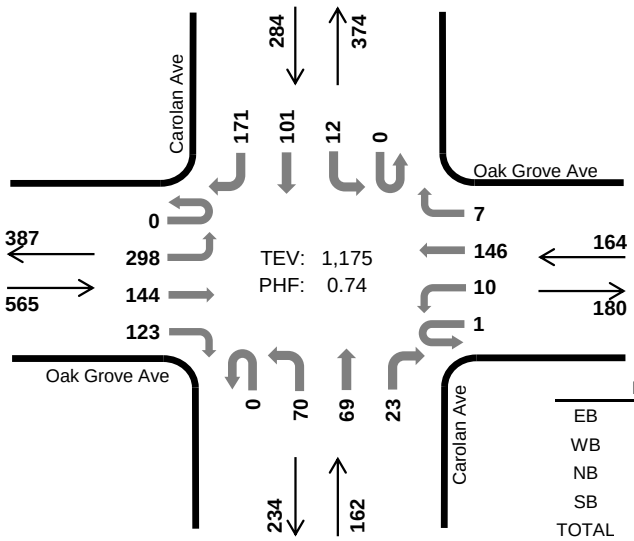
May 22, 2020

Appendix A
Traffic Counts

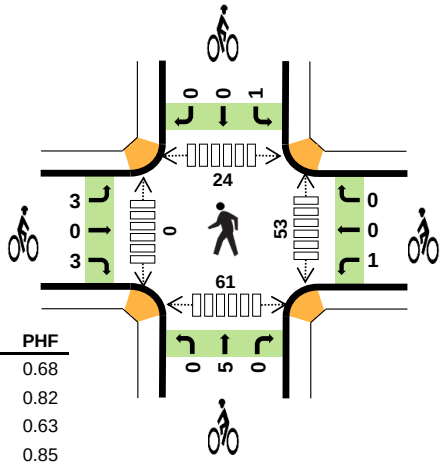
Carolan Ave
Oak Grove Ave

Date: 05/23/2017
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM

Peak Hour



	HV %:	PHF
EB	1.2%	0.68
WB	0.6%	0.82
NB	1.2%	0.63
SB	0.4%	0.85
TOTAL	0.9%	0.74



Two-Hour Count Summaries

Interval Start	Oak Grove Ave Eastbound				Oak Grove Ave Westbound				Carolan Ave Northbound				Carolan Ave Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	47	5	3	0	3	11	0	0	2	7	4	0	1	13	13	109	0
7:15 AM	0	64	6	5	0	4	15	3	0	3	7	1	0	0	16	26	150	0
7:30 AM	0	61	22	31	0	1	19	6	0	8	25	6	0	2	30	22	233	0
7:45 AM	**0**	**67**	**62**	**78**	**0**	**2**	**39**	**3**	**0**	**22**	**34**	**8**	**0**	**4**	**39**	**41**	**399**	891
8:00 AM	**0**	**76**	**28**	**28**	**1**	**4**	**42**	**3**	**0**	**24**	**17**	**10**	**0**	**3**	**21**	**48**	**305**	1,087
8:15 AM	**0**	**79**	**20**	**9**	**0**	**1**	**31**	**0**	**0**	**15**	**8**	**1**	**0**	**1**	**22**	**42**	**229**	1,166
8:30 AM	**0**	**76**	**34**	**8**	**0**	**3**	**34**	**1**	**0**	**9**	**10**	**4**	**0**	**4**	**19**	**40**	**242**	**1,175**
8:45 AM	0	91	42	22	0	3	24	3	0	12	11	4	0	4	29	32	277	1,053
Count Total	0	561	219	184	1	21	215	19	0	95	119	38	0	19	189	264	1,944	0
Peak Hour All	**0**	**298**	**144**	**123**	**1**	**10**	**146**	**7**	**0**	**70**	**69**	**23**	**0**	**12**	**101**	**171**	**1,175**	**0**
Peak Hour HV	**0**	**5**	**2**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**1**	**0**	**11**	**0**
Peak Hour HV%	**-**	**2%**	**1%**	**0%**	**0%**	**0%**	**1%**	**0%**	**-**	**0%**	**3%**	**0%**	**-**	**0%**	**1%**	**0%**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	0	0	0	*0*	1	0	1	0	*2*	5	0	0	4	*9*
7:15 AM	0	0	0	2	*2*	2	1	0	0	*3*	3	0	0	2	*5*
7:30 AM	2	0	1	0	*3*	2	2	2	0	*6*	16	0	5	14	*35*
7:45 AM	**3**	**1**	**1**	**1**	***6***	**2**	**0**	**1**	**0**	***3***	**22**	**0**	**13**	**39**	*74*
8:00 AM	**3**	**0**	**0**	**0**	***3***	**2**	**0**	**0**	**1**	***3***	**11**	**0**	**4**	**7**	*22*
8:15 AM	**0**	**0**	**1**	**0**	***1***	**2**	**1**	**2**	**0**	***5***	**8**	**0**	**5**	**7**	*20*
8:30 AM	**1**	**0**	**0**	**0**	***1***	**0**	**0**	**2**	**0**	***2***	**12**	**0**	**2**	**8**	***22***
8:45 AM	2	1	0	5	*8*	0	0	1	0	*1*	3	1	5	5	*14*
Count Total	11	2	3	8	*24*	11	4	9	1	*25*	80	1	34	86	*201*
Peak Hour	**7**	**1**	**2**	**1**	***11***	**6**	**1**	**5**	**1**	***13***	**53**	**0**	**24**	**61**	***138***

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Oak Grove Ave				Oak Grove Ave				Carolan Ave				Carolan Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0
7:30 AM	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	3	0
7:45 AM	**0**	**2**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**6**	11
8:00 AM	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	14
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	13
8:30 AM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**11**
8:45 AM	0	1	1	0	0	0	1	0	0	0	0	0	0	0	4	1	8	13
Count Total	0	7	4	0	0	0	2	0	0	0	3	0	0	0	6	2	24	0
Peak Hour	**0**	**5**	**2**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**1**	**0**	**11**	**0**

Two-Hour Count Summaries - Bikes

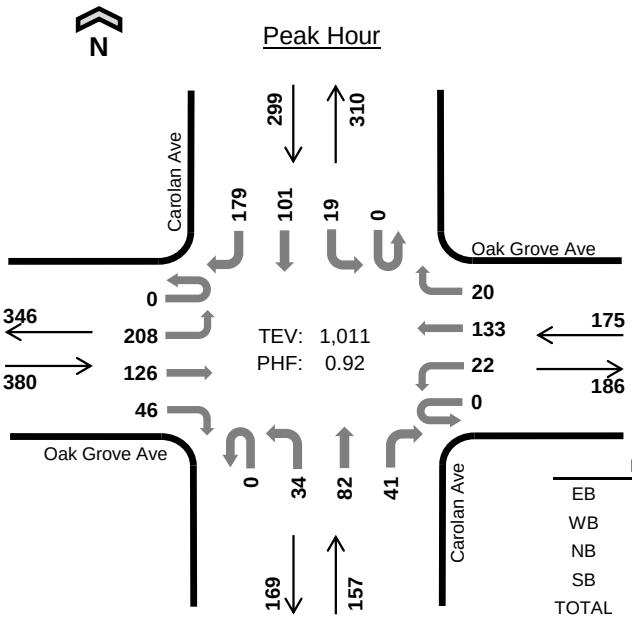
Interval Start	Oak Grove Ave			Oak Grove Ave			Carolan Ave			Carolan Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	1	0	0	0	0	1	0	0	0	0	2	0
7:15 AM	2	0	0	1	0	0	0	0	0	0	0	0	3	0
7:30 AM	2	0	0	1	1	0	0	2	0	0	0	0	6	0
7:45 AM	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**3**	14
8:00 AM	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**3**	15
8:15 AM	**1**	**0**	**1**	**1**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**5**	17
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**	**13**
8:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	11
Count Total	7	0	4	3	1	0	0	9	0	1	0	0	25	0
Peak Hour	**3**	**0**	**3**	**1**	**0**	**0**	**0**	**5**	**0**	**1**	**0**	**0**	**13**	**0**

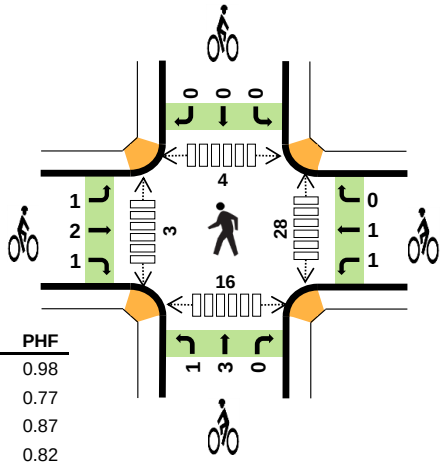
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

Carolan Ave
Oak Grove Ave

Date: 05/23/2017
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM





	HV %:	PHF
EB	0.3%	0.98
WB	2.3%	0.77
NB	0.0%	0.87
SB	0.0%	0.82
TOTAL	0.5%	0.92

Two-Hour Count Summaries

Interval Start		Oak Grove Ave Eastbound				Oak Grove Ave Westbound				Carolan Ave Northbound				Carolan Ave Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	57	23	6	0	3	24	2	0	6	18	4	1	5	20	47	216	0
4:15 PM		0	43	33	9	0	2	25	1	0	7	21	6	0	4	24	42	217	0
4:30 PM		0	61	20	8	0	6	31	4	0	12	21	9	0	1	18	45	236	0
4:45 PM		0	35	41	13	0	8	32	3	0	4	21	10	0	13	31	42	253	922
5:00 PM		**0**	**55**	**33**	**7**	**0**	**5**	**31**	**3**	**0**	**7**	**26**	**12**	**0**	**4**	**23**	**35**	**241**	947
5:15 PM		**0**	**42**	**39**	**16**	**0**	**3**	**29**	**4**	**0**	**2**	**17**	**11**	**0**	**5**	**14**	**47**	**229**	959
5:30 PM		**0**	**53**	**29**	**9**	**0**	**6**	**43**	**8**	**0**	**10**	**19**	**8**	**0**	**7**	**30**	**54**	**276**	999
5:45 PM		**0**	**58**	**25**	**14**	**0**	**8**	**30**	**5**	**0**	**15**	**20**	**10**	**0**	**3**	**34**	**43**	**265**	**1,011**
Count Total		0	404	243	82	0	41	245	30	0	63	163	70	1	42	194	355	1,933	0
Peak Hour	**All**	**0**	**208**	**126**	**46**	**0**	**22**	**133**	**20**	**0**	**34**	**82**	**41**	**0**	**19**	**101**	**179**	**1,011**	**0**
	HV	**0**	**1**	**0**	**0**	**0**	**0**	**3**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**
	HV%	**-**	**0%**	**0%**	**0%**	**-**	**0%**	**2%**	**5%**	**-**	**0%**	**0%**	**0%**	**-**	**0%**	**0%**	**0%**	**0%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	3	0	0	0	*3*	0	0	2	0	*2*	6	0	2	2	*10*
4:15 PM	0	0	0	0	*0*	0	0	0	1	*1*	9	2	0	2	*13*
4:30 PM	0	0	0	0	*0*	0	0	1	1	*2*	4	0	1	0	*5*
4:45 PM	0	0	0	2	*2*	0	0	1	1	*2*	5	0	0	2	*7*
5:00 PM	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**1**	**0**	***2***	**10**	**0**	**0**	**4**	*14*
5:15 PM	**0**	**3**	**0**	**0**	***3***	**1**	**0**	**0**	**0**	***1***	**9**	**1**	**1**	**5**	*16*
5:30 PM	**1**	**1**	**0**	**0**	***2***	**0**	**1**	**1**	**0**	***2***	**7**	**2**	**2**	**5**	*16*
5:45 PM	**0**	**0**	**0**	**0**	***0***	**3**	**0**	**2**	**0**	***5***	**2**	**0**	**1**	**2**	***5***
Count Total	4	4	0	2	*10*	4	2	8	3	*17*	52	5	7	22	*86*
Peak Hour	**1**	**4**	**0**	**0**	***5***	**4**	**2**	**4**	**0**	***10***	**28**	**3**	**4**	**16**	***51***

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Oak Grove Ave				Oak Grove Ave				Carolan Ave				Carolan Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	5
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	5
5:30 PM	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	7
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**
Count Total	0	2	2	0	0	0	3	1	0	0	0	0	0	0	1	1	10	0
Peak Hour	**0**	**1**	**0**	**0**	**0**	**0**	**3**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Oak Grove Ave			Oak Grove Ave			Carolan Ave			Carolan Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	2	0	0	0	0	2	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0
4:30 PM	0	0	0	0	0	0	0	1	0	0	1	0	2	0
4:45 PM	0	0	0	0	0	0	0	1	0	0	1	0	2	7
5:00 PM	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**2**	7
5:15 PM	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	7
5:30 PM	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**2**	7
5:45 PM	**0**	**2**	**1**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**5**	**10**
Count Total	1	2	1	1	1	0	1	7	0	0	3	0	17	0
Peak Hour	**1**	**2**	**1**	**1**	**1**	**0**	**1**	**3**	**0**	**0**	**0**	**0**	**10**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

Traffic Data Service

San Jose, CA
(408) 622-4787
tdsbay@cs.com

File Name : 27 FINAL
Site Code : 00000027
Start Date : 4/24/2019
Page No : 1

Groups Printed- Vehicles

	CALIFORNIA DR Southbound					OAK GROVE AVE Westbound					CALIFORNIA DR Northbound					OAK GROVE AVE Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
05:00 AM	1	13	2	1	17	1	0	0	0	1	5	16	0	1	22	3	5	0	0	8	48
05:15 AM	3	9	1	0	13	1	2	0	0	3	7	6	0	1	14	0	5	2	0	7	37
05:30 AM	0	11	1	0	12	0	2	1	0	3	5	11	1	0	17	3	6	2	0	11	43
05:45 AM	2	25	3	3	33	5	4	4	0	13	9	17	0	5	31	2	3	0	0	5	82
Total	6	58	7	4	75	7	8	5	0	20	26	50	1	7	84	8	19	4	0	31	210
06:00 AM	3	29	0	1	33	0	1	8	0	9	15	23	0	5	43	5	7	1	0	13	98
06:15 AM	2	31	1	1	35	3	5	8	1	17	25	35	0	3	63	1	7	3	1	12	127
06:30 AM	2	34	3	0	39	5	3	11	1	20	30	51	1	1	83	6	22	6	3	37	179
06:45 AM	2	55	7	1	65	3	4	10	1	18	32	51	1	0	84	5	22	9	0	36	203
Total	9	149	11	3	172	11	13	37	3	64	102	160	2	9	273	17	58	19	4	98	607
07:00 AM	6	72	1	0	79	7	6	16	0	29	44	73	4	3	124	2	27	6	1	36	268
07:15 AM	8	76	7	2	93	6	12	16	0	34	33	84	3	6	126	3	29	3	9	44	297
07:30 AM	6	93	7	4	110	7	12	24	2	45	55	98	2	7	162	4	28	8	11	51	368
07:45 AM	9	93	7	2	111	8	18	35	0	61	49	91	5	5	150	5	35	6	3	49	371
Total	29	334	22	8	393	28	48	91	2	169	181	346	14	21	562	14	119	23	24	180	1304
08:00 AM	7	129	14	8	158	21	23	17	0	61	51	115	1	4	171	4	41	4	4	53	443
08:15 AM	10	129	28	9	176	29	35	22	0	86	63	135	1	6	205	10	49	4	9	72	539
08:30 AM	18	173	19	15	225	17	15	21	0	53	51	125	1	10	187	9	62	6	4	81	546
08:45 AM	15	193	53	19	280	24	18	46	0	88	100	154	5	32	291	4	73	4	3	84	743
Total	50	624	114	51	839	91	91	106	0	288	265	529	8	52	854	27	225	18	20	290	2271
09:00 AM	8	149	15	4	176	23	25	34	0	82	65	118	5	7	195	8	62	8	5	83	536
09:15 AM	4	121	7	3	135	9	15	29	0	53	41	106	4	0	151	6	25	6	2	39	378
09:30 AM	4	122	13	3	142	7	9	27	1	44	37	91	2	3	133	6	25	9	5	45	364
09:45 AM	5	125	9	3	142	10	16	29	0	55	39	72	8	0	119	9	27	7	3	46	362
Total	21	517	44	13	595	49	65	119	1	234	182	387	19	10	598	29	139	30	15	213	1640
10:00 AM	12	104	6	6	128	10	13	21	1	45	18	95	3	1	117	3	26	7	6	42	332
10:15 AM	9	120	16	3	148	15	7	24	0	46	34	110	5	4	153	0	22	4	12	38	385
10:30 AM	8	112	7	3	130	9	11	42	0	62	35	102	4	0	141	5	24	3	9	41	374
10:45 AM	3	138	12	1	154	11	11	27	0	49	21	106	4	1	132	6	28	2	3	39	374
Total	32	474	41	13	560	45	42	114	1	202	108	413	16	6	543	14	100	16	30	160	1465
11:00 AM	13	114	7	6	140	3	8	40	1	52	41	98	6	1	146	6	26	2	3	37	375
11:15 AM	7	136	8	1	152	12	16	32	0	60	29	109	6	1	145	7	14	7	5	33	390
11:30 AM	10	128	4	3	145	7	16	32	0	55	27	128	7	3	165	4	12	4	9	29	394
11:45 AM	5	145	9	0	159	8	16	41	0	65	33	99	3	3	138	2	14	4	5	25	387
Total	35	523	28	10	596	30	56	145	1	232	130	434	22	8	594	19	66	17	22	124	1546
12:00 PM	9	118	19	1	147	12	5	33	0	50	35	132	5	1	173	2	21	3	2	28	398
12:15 PM	5	121	11	3	140	12	23	35	0	70	32	98	7	5	142	4	8	4	7	23	375
12:30 PM	10	144	7	0	161	16	12	29	0	57	37	113	4	5	159	5	16	7	4	32	409
12:45 PM	7	114	7	0	128	14	22	35	1	72	41	104	5	1	151	7	16	3	0	26	377
Total	31	497	44	4	576	54	62	132	1	249	145	447	21	12	625	18	61	17	13	109	1559
01:00 PM	9	114	11	5	139	13	12	25	0	50	44	130	9	4	187	3	26	7	3	39	415
01:15 PM	12	122	8	4	146	4	15	28	0	47	37	112	4	1	154	7	22	6	2	37	384
01:30 PM	9	113	9	1	132	7	13	29	0	49	41	141	2	1	185	3	15	6	4	28	394
01:45 PM	4	128	13	0	145	12	11	29	0	52	38	120	8	1	167	5	17	5	2	29	393
Total	34	477	41	10	562	36	51	111	0	198	160	503	23	7	693	18	80	24	11	133	1586
02:00 PM	6	116	8	0	130	13	20	26	0	59	37	138	2	0	177	4	32	8	3	47	413
02:15 PM	13	139	21	1	174	9	11	29	0	49	36	117	6	1	160	6	29	7	2	44	427

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File Name : 27 FINAL
Site Code : 00000027
Start Date : 4/24/2019
Page No : 2

Groups Printed- Vehicles

	CALIFORNIA DR Southbound					OAK GROVE AVE Westbound					CALIFORNIA DR Northbound					OAK GROVE AVE Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
02:30 PM	15	111	24	2	152	33	33	33	1	100	40	138	13	22	213	1	26	4	3	34	499
02:45 PM	12	136	7	11	166	28	40	35	0	103	37	133	15	7	192	3	24	8	3	38	499
Total	46	502	60	14	622	83	104	123	1	311	150	526	36	30	742	14	111	27	11	163	1838
03:00 PM	10	119	27	7	163	18	21	27	3	69	46	135	5	7	193	3	30	8	8	49	474
03:15 PM	13	135	26	15	189	24	24	27	0	75	39	155	4	5	203	9	33	3	5	50	517
03:30 PM	13	137	21	3	174	19	18	34	1	72	39	125	3	19	186	8	32	5	5	50	482
03:45 PM	14	124	24	5	167	15	18	37	0	70	31	123	4	7	165	4	33	4	6	47	449
Total	50	515	98	30	693	76	81	125	4	286	155	538	16	38	747	24	128	20	24	196	1922
04:00 PM	7	151	15	4	177	12	15	35	2	64	38	124	8	3	173	8	26	8	4	46	460
04:15 PM	12	155	16	3	186	13	29	37	0	79	42	144	5	1	192	11	34	4	3	52	509
04:30 PM	8	114	16	7	145	11	30	41	2	84	46	125	9	3	183	12	27	3	4	46	458
04:45 PM	7	154	19	3	183	13	19	48	0	80	48	141	6	10	205	2	26	9	4	41	509
Total	34	574	66	17	691	49	93	161	4	307	174	534	28	17	753	33	113	24	15	185	1936
05:00 PM	6	131	8	1	146	16	22	45	0	83	46	165	7	3	221	10	27	11	4	52	502
05:15 PM	4	172	12	5	193	9	24	35	1	69	50	157	9	3	219	3	36	7	9	55	536
05:30 PM	15	138	15	0	168	12	26	51	0	89	46	133	8	3	190	1	44	2	7	54	501
05:45 PM	8	136	11	5	160	14	32	60	2	108	49	130	8	0	187	8	29	6	8	51	506
Total	33	577	46	11	667	51	104	191	3	349	191	585	32	9	817	22	136	26	28	212	2045
06:00 PM	6	139	21	4	170	16	35	41	1	93	41	139	17	11	208	5	33	6	5	49	520
06:15 PM	7	154	16	5	182	10	43	39	3	95	38	122	7	11	178	6	33	3	5	47	502
06:30 PM	5	122	11	2	140	8	50	48	0	106	33	104	5	3	145	4	23	7	5	39	430
06:45 PM	5	124	10	1	140	10	25	41	1	77	32	116	5	6	159	12	24	4	3	43	419
Total	23	539	58	12	632	44	153	169	5	371	144	481	34	31	690	27	113	20	18	178	1871
07:00 PM	4	93	13	0	110	10	22	28	0	60	36	141	3	4	184	6	21	3	1	31	385
07:15 PM	8	113	9	4	134	6	20	27	1	54	38	104	8	4	154	3	28	1	4	36	378
07:30 PM	4	76	7	4	91	6	23	40	0	69	28	128	10	3	169	6	16	1	6	29	358
07:45 PM	6	80	3	1	90	9	16	29	0	54	18	90	5	4	117	2	18	3	6	29	290
Total	22	362	32	9	425	31	81	124	1	237	120	463	26	15	624	17	83	8	17	125	1411
Grand Total	455	6722	712	209	8098	685	1052	1753	27	3517	2233	6396	298	272	9199	301	1551	293	252	2397	23211
Apprch %	5.6	83	8.8	2.6		19.5	29.9	49.8	0.8		24.3	69.5	3.2	3		12.6	64.7	12.2	10.5		
Total %	2	29	3.1	0.9	34.9	3	4.5	7.6	0.1	15.2	9.6	27.6	1.3	1.2	39.6	1.3	6.7	1.3	1.1	10.3	

	CALIFORNIA DR Southbound				OAK GROVE AVE Westbound				CALIFORNIA DR Northbound				OAK GROVE AVE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 05:00 AM to 09:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:15 AM																	
08:15 AM	10	129	28	167	**29**	**35**	22	86	63	135	1	199	**10**	49	4	63	515
08:30 AM	**18**	173	19	210	17	15	21	53	51	125	1	177	9	62	6	77	517
08:45 AM	15	**193**	**53**	**261**	24	18	**46**	**88**	**100**	**154**	**5**	**259**	4	**73**	4	**81**	**689**
09:00 AM	8	149	15	172	23	25	34	82	65	118	5	188	8	62	**8**	78	520
Total Volume	51	644	115	810	93	93	123	309	279	532	12	823	31	246	22	299	2241
% App. Total	6.3	79.5	14.2		30.1	30.1	39.8		33.9	64.6	1.5		10.4	82.3	7.4		
PHF	.708	.834	.542	.776	.802	.664	.668	.878	.698	.864	.600	.794	.775	.842	.688	.923	.813

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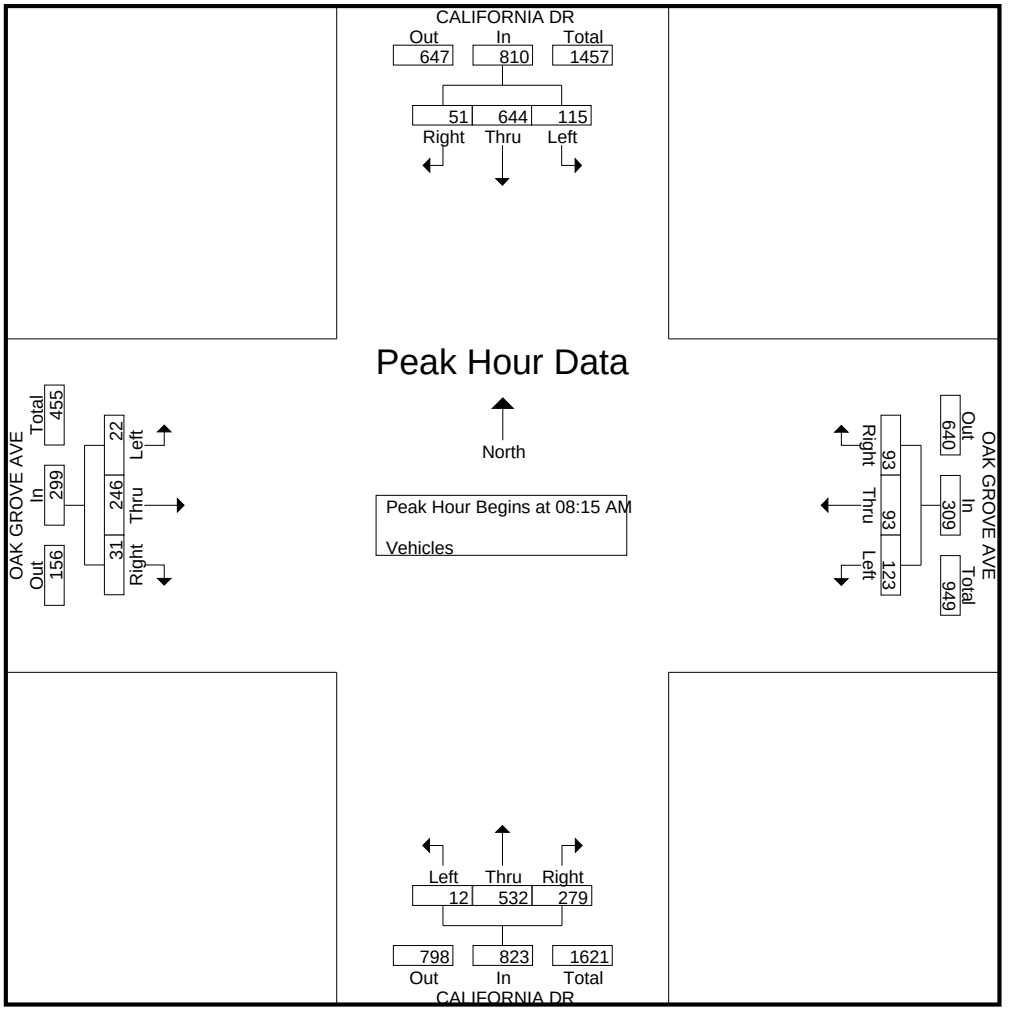
File Name : 27 FINAL
Site Code : 00000027
Start Date : 4/24/2019
Page No : 3



Peak Hour Analysis From 10:00 AM to 02:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 02:00 PM

02:00 PM	6	116	8	130	13	20	26	59	37	**138**	2	177	4	**32**	**8**	**44**	410
02:15 PM	13	**139**	21	**173**	9	11	29	49	36	117	6	159	**6**	29	7	42	423
02:30 PM	**15**	111	**24**	150	**33**	33	33	99	**40**	138	13	**191**	1	26	4	31	471
02:45 PM	12	136	7	155	28	**40**	**35**	**103**	37	133	**15**	185	3	24	8	35	**478**
Total Volume	46	502	60	608	83	104	123	310	150	526	36	712	14	111	27	152	1782
% App. Total	7.6	82.6	9.9		26.8	33.5	39.7		21.1	73.9	5.1		9.2	73	17.8		
PHF	.767	.903	.625	.879	.629	.650	.879	.752	.938	.953	.600	.932	.583	.867	.844	.864	.932

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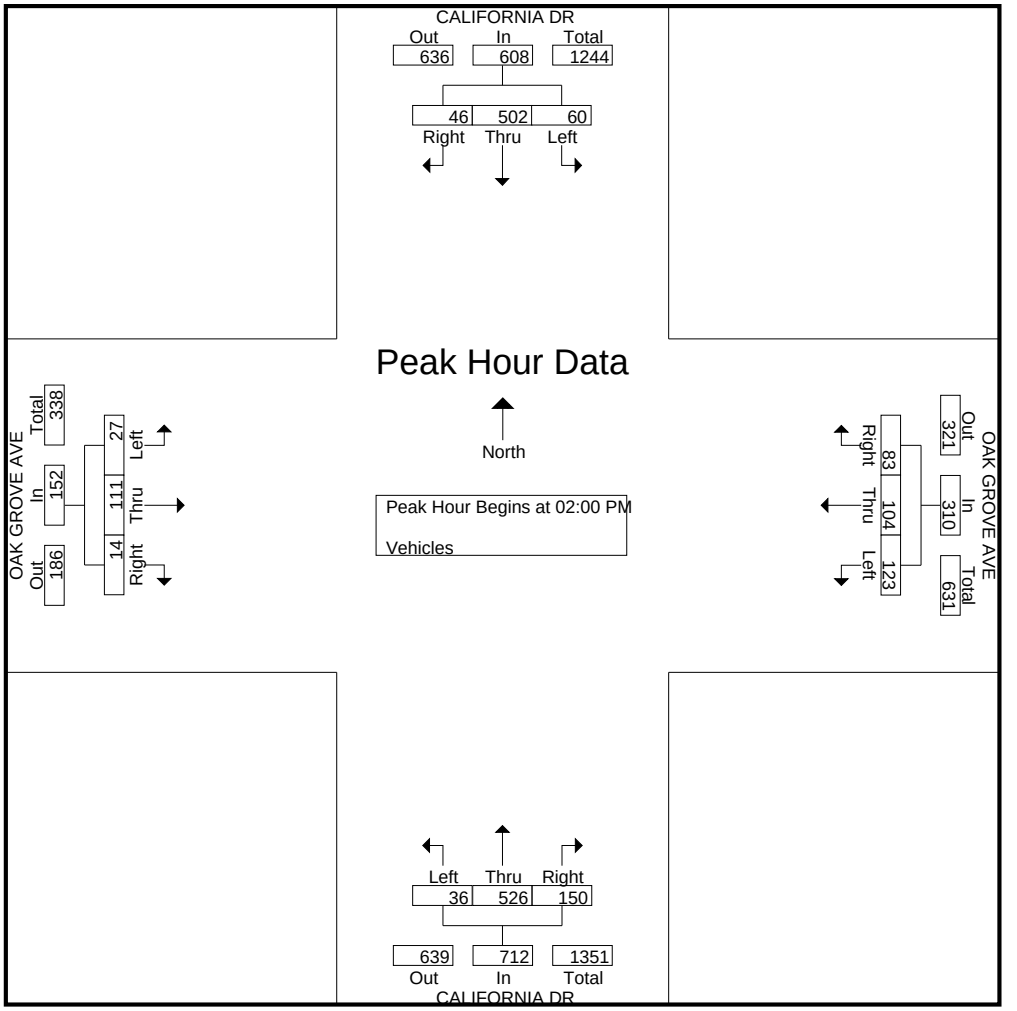
File Name : 27 FINAL
Site Code : 00000027
Start Date : 4/24/2019
Page No : 4



Peak Hour Analysis From 03:00 PM to 07:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 05:15 PM

05:15 PM	4	**172**	12	**188**	9	24	35	68	**50**	**157**	9	**216**	3	36	**7**	46	**518**
05:30 PM	**15**	138	15	168	12	26	51	89	46	133	8	187	1	**44**	2	**47**	491
05:45 PM	8	136	11	155	14	32	**60**	**106**	49	130	8	187	**8**	29	6	43	491
06:00 PM	6	139	**21**	166	**16**	**35**	41	92	41	139	**17**	197	5	33	6	44	499
Total Volume	33	585	59	677	51	117	187	355	186	559	42	787	17	142	21	180	1999
% App. Total	4.9	86.4	8.7		14.4	33	52.7		23.6	71	5.3		9.4	78.9	11.7		
PHF	.550	.850	.702	.900	.797	.836	.779	.837	.930	.890	.618	.911	.531	.807	.750	.957	.965

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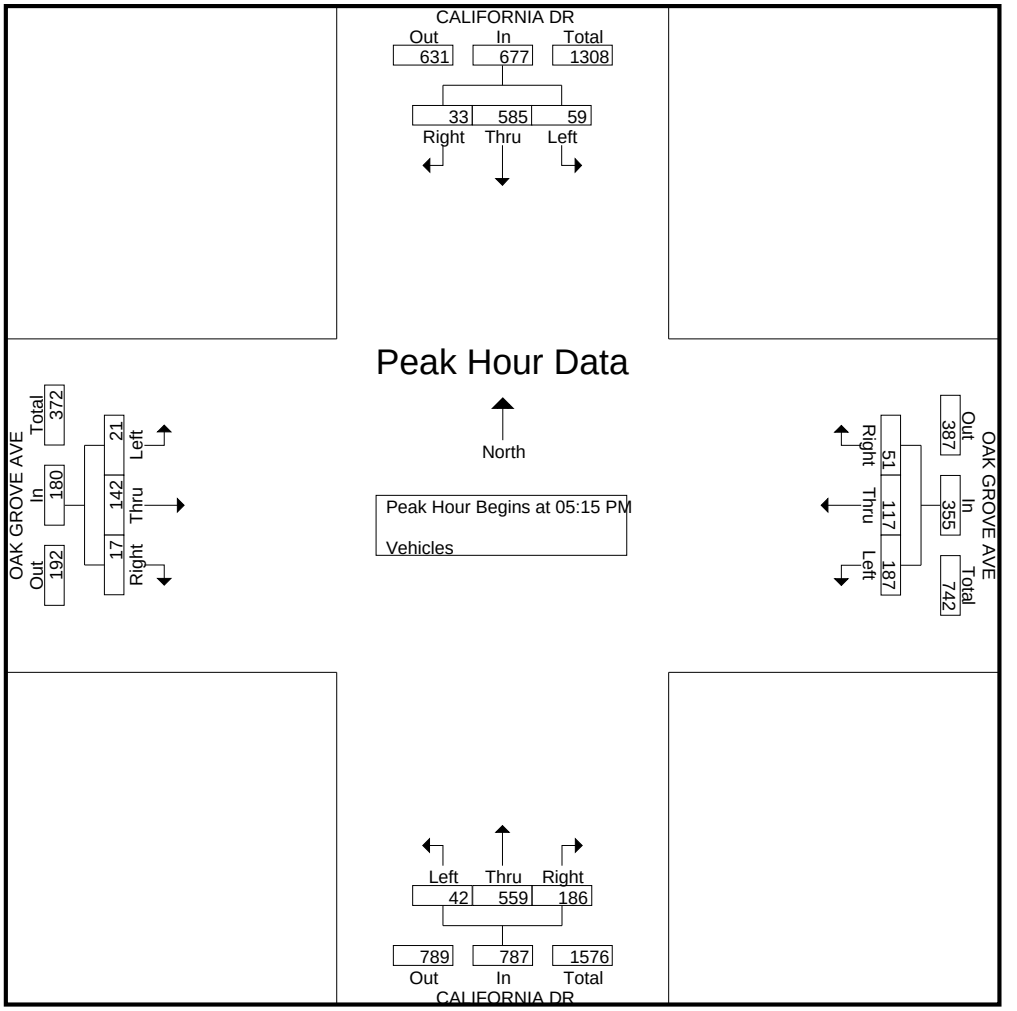
File Name : 27 FINAL
Site Code : 00000027
Start Date : 4/24/2019
Page No : 5



Peak Hour Analysis From 05:00 AM to 07:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 08:15 AM

08:15 AM	10	129	28	167	**29**	**35**	22	86	63	135	1	199	**10**	49	4	63	515
08:30 AM	**18**	173	19	210	17	15	21	53	51	125	1	177	9	62	6	77	517
08:45 AM	15	**193**	**53**	**261**	24	18	**46**	**88**	**100**	**154**	**5**	**259**	4	**73**	4	**81**	**689**
09:00 AM	8	149	15	172	23	25	34	82	65	118	5	188	8	62	**8**	78	520
Total Volume	51	644	115	810	93	93	123	309	279	532	12	823	31	246	22	299	2241
% App. Total	6.3	79.5	14.2		30.1	30.1	39.8		33.9	64.6	1.5		10.4	82.3	7.4		
PHF	.708	.834	.542	.776	.802	.664	.668	.878	.698	.864	.600	.794	.775	.842	.688	.923	.813

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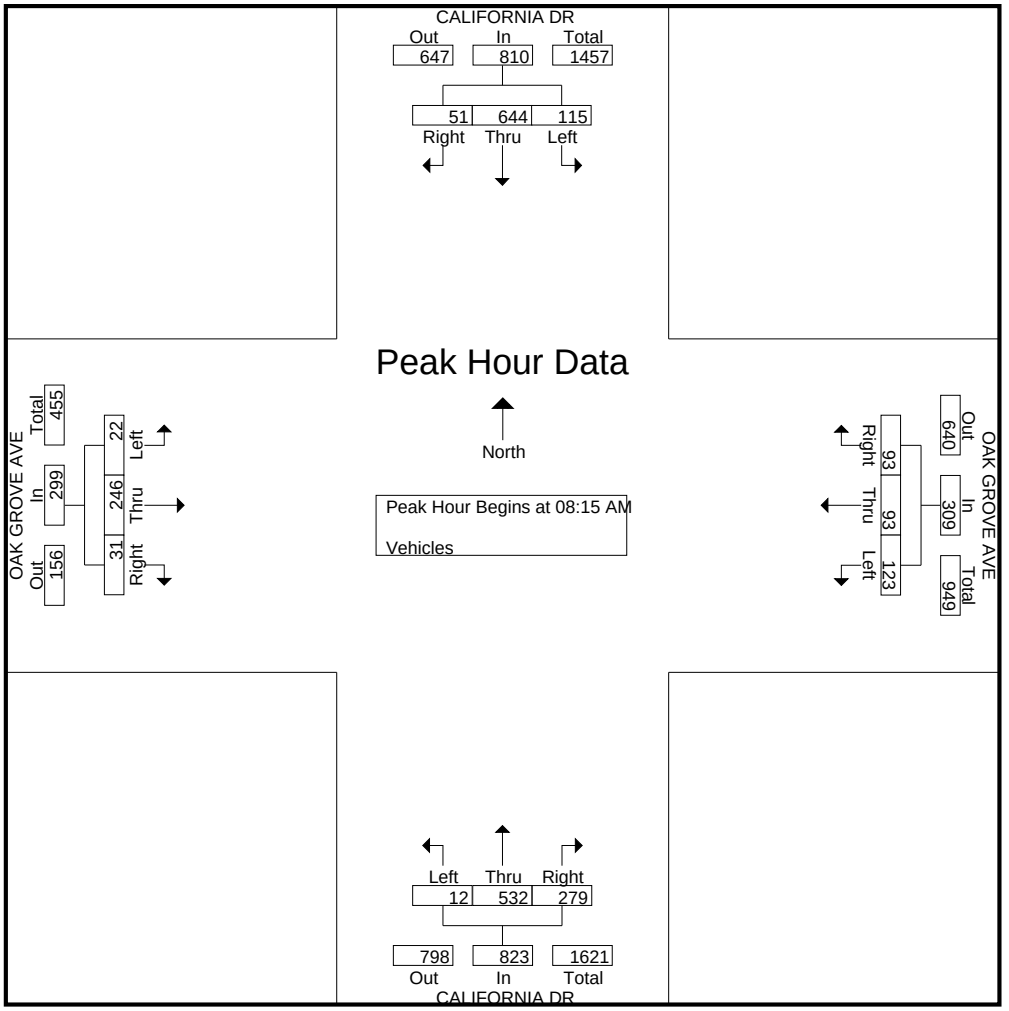
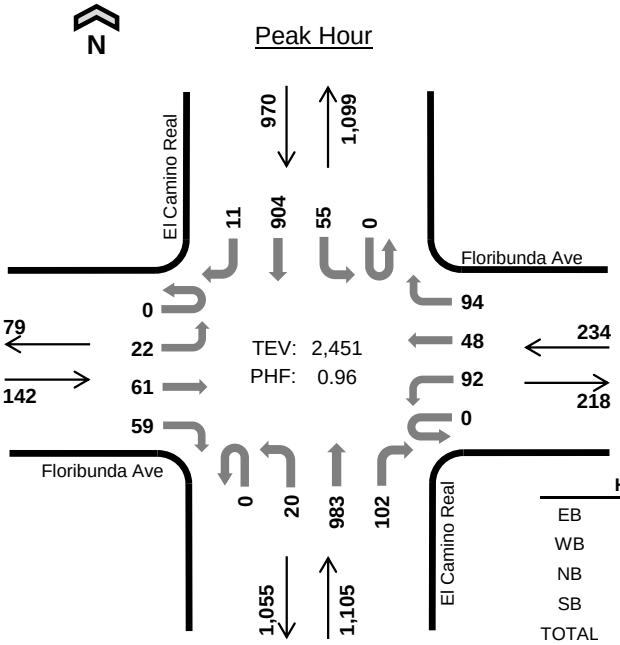
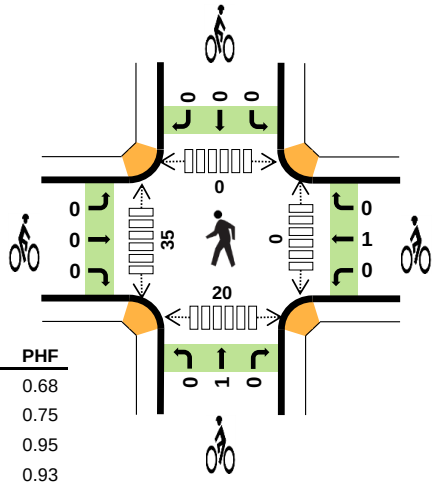
File Name : 27 FINAL
Site Code : 00000027
Start Date : 4/24/2019
Page No : 6



El Camino Real
Floribunda Ave

Date: 04/05/2016
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM





	HV %:	PHF
EB	0.7%	0.68
WB	2.1%	0.75
NB	2.4%	0.95
SB	2.3%	0.93
TOTAL	2.2%	0.96

Two-Hour Count Summaries

Interval Start	Floribunda Ave Eastbound				Floribunda Ave Westbound				El Camino Real Northbound				El Camino Real Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	4	13	4	0	14	1	9	0	4	90	8	0	10	110	0	267	0
7:15 AM	0	5	10	6	0	12	2	10	0	1	133	19	0	6	170	2	376	0
7:30 AM	0	6	15	17	0	26	4	20	0	4	210	18	0	7	193	1	521	0
7:45 AM	**0**	**4**	**14**	**15**	**0**	**17**	**23**	**38**	**0**	**7**	**244**	**17**	**0**	**16**	**241**	**2**	**638**	1,802
8:00 AM	**0**	**6**	**21**	**25**	**0**	**17**	**6**	**23**	**0**	**2**	**220**	**31**	**0**	**12**	**245**	**3**	**611**	2,146
8:15 AM	**0**	**7**	**13**	**11**	**0**	**30**	**14**	**16**	**0**	**7**	**253**	**32**	**0**	**15**	**218**	**0**	**616**	2,386
8:30 AM	**0**	**5**	**13**	**8**	**0**	**28**	**5**	**17**	**0**	**4**	**266**	**22**	**0**	**12**	**200**	**6**	**586**	**2,451**
8:45 AM	0	9	15	8	0	25	5	18	0	3	262	9	0	9	200	9	572	2,385
Count Total	0	46	114	94	0	169	60	151	0	32	1,678	156	0	87	1,577	23	4,187	0
Peak Hour All	**0**	**22**	**61**	**59**	**0**	**92**	**48**	**94**	**0**	**20**	**983**	**102**	**0**	**55**	**904**	**11**	**2,451**	**0**
Peak Hour HV	**0**	**0**	**1**	**0**	**0**	**3**	**0**	**2**	**0**	**1**	**23**	**3**	**0**	**3**	**18**	**1**	**55**	**0**
Peak Hour HV%	**-**	**0%**	**2%**	**0%**	**-**	**3%**	**0%**	**2%**	**-**	**5%**	**2%**	**3%**	**-**	**5%**	**2%**	**9%**	**2%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	0	2	7	*9*	0	0	0	0	*0*	0	2	0	1	*3*
7:15 AM	0	1	2	6	*9*	0	0	0	0	*0*	0	3	0	1	*4*
7:30 AM	1	0	5	4	*10*	0	1	0	0	*1*	0	10	0	8	*18*
7:45 AM	**0**	**0**	**5**	**4**	***9***	**0**	**1**	**0**	**0**	***1***	**0**	**4**	**0**	**8**	*12*
8:00 AM	**1**	**1**	**4**	**5**	***11***	**0**	**0**	**0**	**0**	***0***	**0**	**7**	**0**	**1**	*8*
8:15 AM	**0**	**2**	**8**	**5**	***15***	**0**	**0**	**0**	**0**	***0***	**0**	**9**	**0**	**7**	*16*
8:30 AM	**0**	**2**	**10**	**8**	***20***	**0**	**0**	**1**	**0**	***1***	**0**	**15**	**0**	**4**	***19***
8:45 AM	1	2	5	11	*19*	0	0	0	1	*1*	0	8	0	5	*13*
Count Total	3	8	41	50	*102*	0	2	1	1	*4*	0	58	0	35	*93*
Peak Hour	**1**	**5**	**27**	**22**	***55***	**0**	**1**	**1**	**0**	***2***	**0**	**35**	**0**	**20**	***55***

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Floribunda Ave				Floribunda Ave				El Camino Real				El Camino Real				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	7	0	9	0
7:15 AM	0	0	0	0	0	1	0	0	0	0	2	0	0	0	6	0	9	0
7:30 AM	0	0	1	0	0	0	0	0	0	0	5	0	0	1	3	0	10	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**1**	**3**	**0**	**9**	37
8:00 AM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**4**	**0**	**0**	**1**	**4**	**0**	**11**	39
8:15 AM	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**6**	**2**	**0**	**1**	**4**	**0**	**15**	45
8:30 AM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**1**	**8**	**1**	**0**	**0**	**7**	**1**	**20**	**55**
8:45 AM	0	0	1	0	0	1	0	1	0	0	4	1	0	1	9	1	19	65
Count Total	0	0	3	0	0	5	0	3	0	1	36	4	0	5	43	2	102	0
Peak Hour	**0**	**0**	**1**	**0**	**0**	**3**	**0**	**2**	**0**	**1**	**23**	**3**	**0**	**3**	**18**	**1**	**55**	**0**

Two-Hour Count Summaries - Bikes

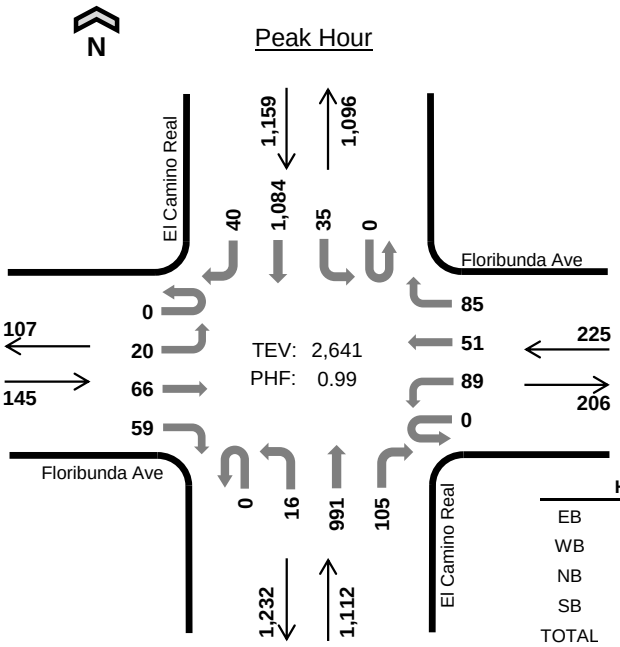
Interval Start	Floribunda Ave			Floribunda Ave			El Camino Real			El Camino Real			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0
7:45 AM	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	2
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**2**
8:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	2
Count Total	0	0	0	0	2	0	0	1	0	0	1	0	4	0
Peak Hour	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**2**	**0**

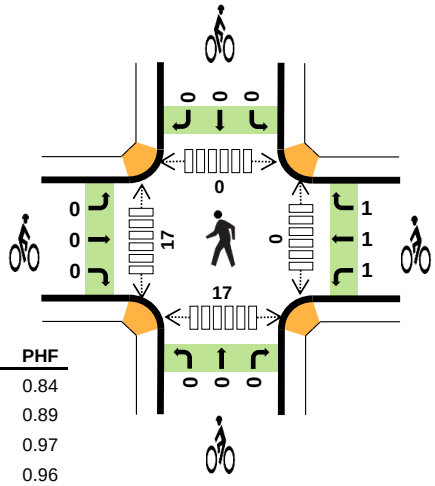
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

El Camino Real
Floribunda Ave

Date: 04/05/2016
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM





	HV %:	PHF
EB	0.0%	0.84
WB	0.0%	0.89
NB	1.3%	0.97
SB	0.9%	0.96
TOTAL	0.9%	0.99

Two-Hour Count Summaries

Interval Start	Floribunda Ave Eastbound				Floribunda Ave Westbound				El Camino Real Northbound				El Camino Real Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	3	8	12	0	24	6	11	0	3	253	16	0	9	228	4	577	0
4:15 PM	0	4	14	17	0	19	10	18	0	3	248	23	0	8	247	7	618	0
4:30 PM	0	5	9	8	0	11	10	21	0	4	264	25	0	4	276	6	643	0
4:45 PM	0	4	10	21	0	18	10	16	0	8	268	31	0	10	246	11	653	2,491
5:00 PM	**0**	**5**	**16**	**13**	**0**	**32**	**8**	**21**	**0**	**3**	**231**	**32**	**0**	**8**	**281**	**9**	**659**	2,573
5:15 PM	**0**	**3**	**24**	**16**	**0**	**29**	**13**	**21**	**0**	**1**	**254**	**24**	**0**	**11**	**260**	**12**	**668**	2,623
5:30 PM	**0**	**7**	**19**	**17**	**0**	**15**	**11**	**24**	**0**	**2**	**253**	**24**	**0**	**4**	**263**	**10**	**649**	2,629
5:45 PM	**0**	**5**	**7**	**13**	**0**	**13**	**19**	**19**	**0**	**10**	**253**	**25**	**0**	**12**	**280**	**9**	**665**	**2,641**
Count Total	0	36	107	117	0	161	87	151	0	34	2,024	200	0	66	2,081	68	5,132	0
Peak Hour All	**0**	**20**	**66**	**59**	**0**	**89**	**51**	**85**	**0**	**16**	**991**	**105**	**0**	**35**	**1,084**	**40**	**2,641**	**0**
Peak Hour HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**15**	**0**	**0**	**0**	**9**	**1**	**25**	**0**
Peak Hour HV%	**-**	**0%**	**0%**	**0%**	**-**	**0%**	**0%**	**0%**	**-**	**0%**	**2%**	**0%**	**-**	**0%**	**1%**	**3%**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	0	2	1	*3*	0	0	0	0	*0*	0	4	0	2	*6*
4:15 PM	0	0	5	4	*9*	1	0	0	0	*1*	0	9	0	3	*12*
4:30 PM	0	0	4	2	*6*	2	0	0	0	*2*	0	3	0	2	*5*
4:45 PM	0	0	4	2	*6*	0	0	0	1	*1*	0	4	0	4	*8*
5:00 PM	**0**	**0**	**5**	**1**	***6***	**0**	**2**	**0**	**0**	***2***	**0**	**4**	**0**	**6**	*10*
5:15 PM	**0**	**0**	**4**	**4**	***8***	**0**	**1**	**0**	**0**	***1***	**0**	**5**	**0**	**2**	*7*
5:30 PM	**0**	**0**	**4**	**2**	***6***	**0**	**0**	**0**	**0**	***0***	**0**	**6**	**0**	**4**	*10*
5:45 PM	**0**	**0**	**2**	**3**	***5***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**5**	***7***
Count Total	0	0	30	19	*49*	3	3	0	1	*7*	0	37	0	28	*65*
Peak Hour	**0**	**0**	**15**	**10**	***25***	**0**	**3**	**0**	**0**	***3***	**0**	**17**	**0**	**17**	***34***

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Floribunda Ave Eastbound				Floribunda Ave Westbound				El Camino Real Northbound				El Camino Real Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	3	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	5	0	0	0	4	0	9	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	2	0	6	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	2	0	6	24
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**1**	**0**	**6**	27
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**3**	**1**	**8**	26
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**2**	**0**	**6**	26
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**3**	**0**	**5**	**25**
Count Total	0	0	0	0	0	0	0	0	0	0	30	0	0	0	18	1	49	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**15**	**0**	**0**	**0**	**9**	**1**	**25**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Floribunda Ave Eastbound			Floribunda Ave Westbound			El Camino Real Northbound			El Camino Real Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0
4:30 PM	0	2	0	0	0	0	0	0	0	0	0	0	2	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	4
5:00 PM	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	6
5:15 PM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	6
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	4
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**
Count Total	0	3	0	1	1	1	0	0	0	0	0	1	7	0
Peak Hour	**0**	**0**	**0**	**1**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

Appendix B
Level of Service Calculations

Intersection	
Intersection Delay, s/veh	14.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	307	148	127	11	150	7	72	71	24	12	104	176
Future Vol, veh/h	307	148	127	11	150	7	72	71	24	12	104	176
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	307	148	127	11	150	7	72	71	24	12	104	176
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	16.4	13.3	13.8	11.9
HCM LOS	C	B	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	43%	100%	0%	7%	10%	0%
Vol Thru, %	43%	0%	54%	89%	90%	0%
Vol Right, %	14%	0%	46%	4%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	167	307	275	168	116	176
LT Vol	72	307	0	11	12	0
Through Vol	71	0	148	150	104	0
RT Vol	24	0	127	7	0	176
Lane Flow Rate	167	307	275	168	116	176
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.332	0.582	0.458	0.323	0.227	0.307
Departure Headway (Hd)	7.155	6.826	5.99	6.927	7.056	6.289
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	499	525	597	516	506	567
Service Time	5.248	4.598	3.762	5.019	4.844	4.076
HCM Lane V/C Ratio	0.335	0.585	0.461	0.326	0.229	0.31
HCM Control Delay	13.8	18.8	13.8	13.3	11.9	11.9
HCM Lane LOS	B	C	B	B	B	B
HCM 95th-tile Q	1.4	3.7	2.4	1.4	0.9	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	248	31	124	94	94	12	537	282	116	650	52
Future Volume (veh/h)	22	248	31	124	94	94	12	537	282	116	650	52
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	22	248	31	124	94	94	12	537	0	116	650	25
Adj No. of Lanes	1	1	0	1	1	0	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	413	378	47	341	164	164	63	871	390	184	1112	498
Arrive On Green	0.23	0.23	0.20	0.19	0.19	0.16	0.04	0.25	0.00	0.10	0.31	0.31
Sat Flow, veh/h	1774	1624	203	1774	856	856	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	22	0	279	124	0	188	12	537	0	116	650	25
Grp Sat Flow(s),veh/h/ln	1774	0	1827	1774	0	1712	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.5	0.0	7.4	3.2	0.0	5.3	0.3	7.2	0.0	3.3	8.2	0.6
Cycle Q Clear(g_c), s	0.5	0.0	7.4	3.2	0.0	5.3	0.3	7.2	0.0	3.3	8.2	0.6
Prop In Lane	1.00		0.11	1.00		0.50	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	413	0	425	341	0	329	63	871	390	184	1112	498
V/C Ratio(X)	0.05	0.00	0.66	0.36	0.00	0.57	0.19	0.62	0.00	0.63	0.58	0.05
Avail Cap(c_a), veh/h	951	0	979	951	0	918	117	1365	611	184	1498	670
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.8	0.0	18.6	18.7	0.0	19.9	24.9	17.8	0.0	22.9	15.3	12.7
Incr Delay (d2), s/veh	0.1	0.0	1.7	0.7	0.0	1.6	1.5	0.7	0.0	6.8	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	3.9	1.6	0.0	2.7	0.2	3.6	0.0	2.0	4.0	0.3
LnGrp Delay(d),s/veh	15.9	0.0	20.3	19.3	0.0	21.4	26.4	18.5	0.0	29.7	15.8	12.7
LnGrp LOS	B		C	B		C	C	B		C	B	B
Approach Vol, veh/h		301			312			549			791	
Approach Delay, s/veh		20.0			20.6			18.7			17.7	
Approach LOS		B			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.5	16.1		15.4	4.9	19.7		13.2
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	4.0	19.0		27.0	2.0	21.0		27.0
Max Q Clear Time (g_c+I1), s	5.3	9.2		9.4	2.3	10.2		7.3
Green Ext Time (p_c), s	0.0	2.4		1.6	0.0	3.2		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	18.8
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	22	31	12	831	805	52
Future Vol, veh/h	22	31	12	831	805	52
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	0	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	31	12	831	805	52

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1271	429	857	0	-	0
Stage 1	831	-	-	-	-	-
Stage 2	440	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	160	574	779	-	-	-
Stage 1	388	-	-	-	-	-
Stage 2	616	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	158	574	779	-	-	-
Mov Cap-2 Maneuver	282	-	-	-	-	-
Stage 1	382	-	-	-	-	-
Stage 2	616	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.3	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	779	-	401	-	-
HCM Lane V/C Ratio	0.015	-	0.132	-	-
HCM Control Delay (s)	9.7	-	15.3	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	0.5	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	63	61	96	50	98	21	1023	106	57	941	11
Future Volume (veh/h)	23	63	61	96	50	98	21	1023	106	57	941	11
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	23	63	0	96	50	98	21	1023	106	57	941	11
Adj No. of Lanes	0	1	1	0	1	0	0	2	0	0	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	170	338	348	236	98	138	107	1710	175	153	1744	20
Arrive On Green	0.22	0.22	0.00	0.22	0.22	0.22	0.55	0.55	0.55	0.55	0.55	0.55
Sat Flow, veh/h	242	1538	1583	489	443	626	21	3115	319	91	3175	36
Grp Volume(v), veh/h	86	0	0	244	0	0	605	0	545	496	0	513
Grp Sat Flow(s),veh/h/ln	1780	0	1583	1558	0	0	1816	0	1639	1613	0	1689
Q Serve(g_s), s	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	8.8	0.0	0.0	7.7
Cycle Q Clear(g_c), s	1.5	0.0	0.0	5.6	0.0	0.0	8.5	0.0	8.8	6.4	0.0	7.7
Prop In Lane	0.27		1.00	0.39		0.40	0.03		0.19	0.11		0.02
Lane Grp Cap(c), veh/h	509	0	348	472	0	0	1093	0	900	989	0	927
V/C Ratio(X)	0.17	0.00	0.00	0.52	0.00	0.00	0.55	0.00	0.61	0.50	0.00	0.55
Avail Cap(c_a), veh/h	1136	0	954	1052	0	0	2696	0	2417	2299	0	2490
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.4	0.0	0.0	14.0	0.0	0.0	5.9	0.0	5.9	5.4	0.0	5.7
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.9	0.0	0.0	0.4	0.0	0.7	0.4	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.0	2.5	0.0	0.0	4.3	0.0	3.9	3.3	0.0	3.6
LnGrp Delay(d),s/veh	12.6	0.0	0.0	14.8	0.0	0.0	6.3	0.0	6.6	5.8	0.0	6.2
LnGrp LOS	B			B			A		A	A		A
Approach Vol, veh/h		86			244			1150			1009	
Approach Delay, s/veh		12.6			14.8			6.4			6.0	
Approach LOS		B			B			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		25.9		13.1		25.9		13.1
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		57.5		23.5		57.5		23.5
Max Q Clear Time (g_c+I1), s		10.8		3.5		9.7		7.6
Green Ext Time (p_c), s		10.7		0.4		9.4		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	7.3
HCM 2010 LOS	A

Intersection	
Intersection Delay, s/veh	12.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	214	130	47	23	137	21	35	84	42	20	104	184
Future Vol, veh/h	214	130	47	23	137	21	35	84	42	20	104	184
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	214	130	47	23	137	21	35	84	42	20	104	184
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	12.8	12.9	12.6	11.2
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	22%	100%	0%	13%	16%	0%
Vol Thru, %	52%	0%	73%	76%	84%	0%
Vol Right, %	26%	0%	27%	12%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	161	214	177	181	124	184
LT Vol	35	214	0	23	20	0
Through Vol	84	0	130	137	104	0
RT Vol	42	0	47	21	0	184
Lane Flow Rate	161	214	177	181	124	184
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.298	0.402	0.298	0.33	0.228	0.298
Departure Headway (Hd)	6.655	6.765	6.069	6.565	6.624	5.83
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	538	531	589	545	539	613
Service Time	4.731	4.529	3.832	4.638	4.392	3.597
HCM Lane V/C Ratio	0.299	0.403	0.301	0.332	0.23	0.3
HCM Control Delay	12.6	14	11.4	12.9	11.4	11.1
HCM Lane LOS	B	B	B	B	B	B
HCM 95th-tile Q	1.2	1.9	1.2	1.4	0.9	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	143	17	189	118	52	42	565	188	60	591	33
Future Volume (veh/h)	21	143	17	189	118	52	42	565	188	60	591	33
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	21	143	17	189	118	52	42	565	19	60	591	6
Adj No. of Lanes	1	1	0	1	1	0	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	292	269	32	367	254	112	109	995	445	132	1041	466
Arrive On Green	0.16	0.16	0.13	0.21	0.21	0.17	0.06	0.28	0.28	0.07	0.29	0.29
Sat Flow, veh/h	1774	1634	194	1774	1227	541	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	21	0	160	189	0	170	42	565	19	60	591	6
Grp Sat Flow(s),veh/h/ln	1774	0	1828	1774	0	1767	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.4	0.0	3.5	4.2	0.0	3.7	1.0	6.0	0.4	1.4	6.2	0.1
Cycle Q Clear(g_c), s	0.4	0.0	3.5	4.2	0.0	3.7	1.0	6.0	0.4	1.4	6.2	0.1
Prop In Lane	1.00		0.11	1.00		0.31	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	292	0	301	367	0	366	109	995	445	132	1041	466
V/C Ratio(X)	0.07	0.00	0.53	0.51	0.00	0.46	0.39	0.57	0.04	0.45	0.57	0.01
Avail Cap(c_a), veh/h	1149	0	1184	1149	0	1145	141	1689	756	202	1809	809
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.5	0.0	16.9	15.5	0.0	15.5	19.9	13.5	11.5	19.5	13.2	11.0
Incr Delay (d2), s/veh	0.1	0.0	1.5	1.1	0.0	0.9	2.2	0.5	0.0	2.4	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	1.9	2.2	0.0	1.9	0.6	3.0	0.2	0.8	3.1	0.1
LnGrp Delay(d),s/veh	15.6	0.0	18.4	16.6	0.0	16.4	22.1	14.0	11.5	21.9	13.6	11.0
LnGrp LOS	B		B	B		B	C	B	B	C	B	B
Approach Vol, veh/h		181			359			626			657	
Approach Delay, s/veh		18.0			16.5			14.5			14.4	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.3	15.4		10.2	5.7	15.9		12.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	3.5	19.5		27.0	2.0	21.0		27.0
Max Q Clear Time (g_c+I1), s	3.4	8.0		5.5	3.0	8.2		6.2
Green Ext Time (p_c), s	0.0	2.9		0.9	0.0	3.1		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	15.2
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	21	17	42	795	797	33
Future Vol, veh/h	21	17	42	795	797	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	0	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	17	42	795	797	33

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1296	415	830	0	-	0
Stage 1	814	-	-	-	-	-
Stage 2	482	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	154	586	798	-	-	-
Stage 1	396	-	-	-	-	-
Stage 2	587	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	146	586	798	-	-	-
Mov Cap-2 Maneuver	271	-	-	-	-	-
Stage 1	375	-	-	-	-	-
Stage 2	587	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.3	0.5	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	798	-	357	-	-
HCM Lane V/C Ratio	0.053	-	0.106	-	-
HCM Control Delay (s)	9.8	-	16.3	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.2	-	0.4	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	69	61	93	53	88	17	1031	109	36	1128	42
Future Volume (veh/h)	21	69	61	93	53	88	17	1031	109	36	1128	42
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	21	69	0	93	53	88	17	1031	109	36	1128	42
Adj No. of Lanes	0	1	1	0	1	0	0	2	0	0	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	151	332	331	227	100	123	99	1778	186	118	1859	68
Arrive On Green	0.21	0.21	0.00	0.21	0.21	0.21	0.57	0.57	0.57	0.57	0.57	0.57
Sat Flow, veh/h	203	1589	1583	499	477	588	16	3114	326	43	3255	120
Grp Volume(v), veh/h	90	0	0	234	0	0	609	0	548	618	0	588
Grp Sat Flow(s),veh/h/ln	1792	0	1583	1563	0	0	1818	0	1638	1744	0	1674
Q Serve(g_s), s	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	8.8	0.0	0.0	9.5
Cycle Q Clear(g_c), s	1.6	0.0	0.0	5.6	0.0	0.0	8.5	0.0	8.8	8.7	0.0	9.5
Prop In Lane	0.23		1.00	0.40		0.38	0.03		0.20	0.06		0.07
Lane Grp Cap(c), veh/h	483	0	331	450	0	0	1128	0	935	1089	0	956
V/C Ratio(X)	0.19	0.00	0.00	0.52	0.00	0.00	0.54	0.00	0.59	0.57	0.00	0.62
Avail Cap(c_a), veh/h	1053	0	871	968	0	0	2610	0	2343	2466	0	2395
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.4	0.0	0.0	14.9	0.0	0.0	5.6	0.0	5.7	5.6	0.0	5.8
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.9	0.0	0.0	0.4	0.0	0.6	0.5	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.0	2.5	0.0	0.0	4.4	0.0	4.0	4.4	0.0	4.4
LnGrp Delay(d),s/veh	13.6	0.0	0.0	15.9	0.0	0.0	6.0	0.0	6.2	6.1	0.0	6.5
LnGrp LOS	B			B			A		A	A		A
Approach Vol, veh/h		90			234			1157			1206	
Approach Delay, s/veh		13.6			15.9			6.1			6.3	
Approach LOS		B			B			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		27.8		13.0		27.8		13.0
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		58.5		22.5		58.5		22.5
Max Q Clear Time (g_c+I1), s		10.8		3.6		11.5		7.6
Green Ext Time (p_c), s		10.8		0.4		11.8		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	7.3
HCM 2010 LOS	A

Intersection	
Intersection Delay, s/veh	15.2
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	311	149	127	11	152	7	72	71	24	16	107	209
Future Vol, veh/h	311	149	127	11	152	7	72	71	24	16	107	209
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	311	149	127	11	152	7	72	71	24	16	107	209
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	17.3	13.9	14.2	12.7
HCM LOS	C	B	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	43%	100%	0%	6%	13%	0%
Vol Thru, %	43%	0%	54%	89%	87%	0%
Vol Right, %	14%	0%	46%	4%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	167	311	276	170	123	209
LT Vol	72	311	0	11	16	0
Through Vol	71	0	149	152	107	0
RT Vol	24	0	127	7	0	209
Lane Flow Rate	167	311	276	170	123	209
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.343	0.602	0.47	0.34	0.247	0.375
Departure Headway (Hd)	7.397	7.079	6.243	7.19	7.238	6.456
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	488	513	580	501	499	560
Service Time	5.419	4.779	3.943	5.22	4.938	4.156
HCM Lane V/C Ratio	0.342	0.606	0.476	0.339	0.246	0.373
HCM Control Delay	14.2	19.9	14.4	13.9	12.3	13
HCM Lane LOS	B	C	B	B	B	B
HCM 95th-tile Q	1.5	3.9	2.5	1.5	1	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	250	38	146	108	94	14	543	286	116	658	52
Future Volume (veh/h)	23	250	38	146	108	94	14	543	286	116	658	52
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	23	250	38	146	108	94	14	543	0	116	658	25
Adj No. of Lanes	1	1	0	1	1	0	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	420	374	57	354	184	160	64	866	387	178	1094	490
Arrive On Green	0.24	0.24	0.21	0.20	0.20	0.17	0.04	0.24	0.00	0.10	0.31	0.31
Sat Flow, veh/h	1774	1580	240	1774	920	801	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	23	0	288	146	0	202	14	543	0	116	658	25
Grp Sat Flow(s),veh/h/ln	1774	0	1820	1774	0	1721	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.5	0.0	7.9	3.9	0.0	5.9	0.4	7.5	0.0	3.4	8.6	0.6
Cycle Q Clear(g_c), s	0.5	0.0	7.9	3.9	0.0	5.9	0.4	7.5	0.0	3.4	8.6	0.6
Prop In Lane	1.00		0.13	1.00		0.47	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	420	0	430	354	0	343	64	866	387	178	1094	490
V/C Ratio(X)	0.05	0.00	0.67	0.41	0.00	0.59	0.22	0.63	0.00	0.65	0.60	0.05
Avail Cap(c_a), veh/h	923	0	947	923	0	896	113	1325	593	178	1454	650
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.2	0.0	19.1	19.1	0.0	20.2	25.7	18.5	0.0	23.7	16.1	13.3
Incr Delay (d2), s/veh	0.1	0.0	1.8	0.8	0.0	1.6	1.7	0.8	0.0	8.1	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	4.1	2.0	0.0	2.9	0.2	3.7	0.0	2.1	4.3	0.3
LnGrp Delay(d),s/veh	16.2	0.0	20.9	19.9	0.0	21.8	27.4	19.2	0.0	31.8	16.6	13.3
LnGrp LOS	B		C	B		C	C	B		C	B	B
Approach Vol, veh/h		311			348			557			799	
Approach Delay, s/veh		20.5			21.0			19.4			18.7	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.5	16.4		16.0	5.0	19.9		13.9
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	4.0	19.0		27.0	2.0	21.0		27.0
Max Q Clear Time (g_c+I1), s	5.4	9.5		9.9	2.4	10.6		7.9
Green Ext Time (p_c), s	0.0	2.4		1.7	0.0	3.2		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	19.6
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	22	38	15	843	827	52
Future Vol, veh/h	22	38	15	843	827	52
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	0	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	38	15	843	827	52

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1305	440	879	0	-	0
Stage 1	853	-	-	-	-	-
Stage 2	452	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	152	565	764	-	-	-
Stage 1	378	-	-	-	-	-
Stage 2	608	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	149	565	764	-	-	-
Mov Cap-2 Maneuver	272	-	-	-	-	-
Stage 1	370	-	-	-	-	-
Stage 2	608	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.4	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	764	-	405	-	-
HCM Lane V/C Ratio	0.02	-	0.148	-	-
HCM Control Delay (s)	9.8	-	15.4	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	63	61	96	50	101	21	1030	106	63	953	11
Future Volume (veh/h)	23	63	61	96	50	101	21	1030	106	63	953	11
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	23	63	0	96	50	101	21	1030	106	63	953	11
Adj No. of Lanes	0	1	1	0	1	0	0	2	0	0	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	170	340	351	234	97	141	106	1714	174	159	1723	19
Arrive On Green	0.22	0.22	0.00	0.22	0.22	0.22	0.55	0.55	0.55	0.55	0.55	0.55
Sat Flow, veh/h	244	1536	1583	482	439	637	21	3117	317	101	3134	35
Grp Volume(v), veh/h	86	0	0	247	0	0	609	0	548	501	0	526
Grp Sat Flow(s),veh/h/ln	1780	0	1583	1559	0	0	1816	0	1639	1581	0	1689
Q Serve(g_s), s	0.0	0.0	0.0	4.1	0.0	0.0	0.0	0.0	8.9	0.0	0.0	8.0
Cycle Q Clear(g_c), s	1.5	0.0	0.0	5.7	0.0	0.0	8.6	0.0	8.9	6.5	0.0	8.0
Prop In Lane	0.27		1.00	0.39		0.41	0.03		0.19	0.13		0.02
Lane Grp Cap(c), veh/h	510	0	351	472	0	0	1093	0	901	973	0	929
V/C Ratio(X)	0.17	0.00	0.00	0.52	0.00	0.00	0.56	0.00	0.61	0.51	0.00	0.57
Avail Cap(c_a), veh/h	1124	0	944	1041	0	0	2666	0	2391	2227	0	2464
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.5	0.0	0.0	14.1	0.0	0.0	5.9	0.0	6.0	5.5	0.0	5.8
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.9	0.0	0.0	0.4	0.0	0.7	0.4	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.0	2.6	0.0	0.0	4.4	0.0	4.1	3.3	0.0	3.8
LnGrp Delay(d),s/veh	12.7	0.0	0.0	15.0	0.0	0.0	6.4	0.0	6.7	5.9	0.0	6.3
LnGrp LOS	B			B			A		A	A		A
Approach Vol, veh/h		86			247			1157			1027	
Approach Delay, s/veh		12.7			15.0			6.5			6.1	
Approach LOS		B			B			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		26.2		13.2		26.2		13.2
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		57.5		23.5		57.5		23.5
Max Q Clear Time (g_c+I1), s		10.9		3.5		10.0		7.7
Green Ext Time (p_c), s		10.8		0.4		9.7		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	7.4
HCM 2010 LOS	A

Intersection	
Intersection Delay, s/veh	12.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	240	133	47	26	138	21	35	86	42	23	104	194
Future Vol, veh/h	240	133	47	26	138	21	35	86	42	23	104	194
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	240	133	47	26	138	21	35	86	42	23	104	194
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	13.8	13.3	12.9	11.6
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	21%	100%	0%	14%	18%	0%
Vol Thru, %	53%	0%	74%	75%	82%	0%
Vol Right, %	26%	0%	26%	11%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	163	240	180	185	127	194
LT Vol	35	240	0	26	23	0
Through Vol	86	0	133	138	104	0
RT Vol	42	0	47	21	0	194
Lane Flow Rate	163	240	180	185	127	194
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.308	0.456	0.308	0.344	0.238	0.321
Departure Headway (Hd)	6.8	6.845	6.151	6.693	6.756	5.951
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	525	523	581	535	528	599
Service Time	4.888	4.617	3.923	4.776	4.534	3.728
HCM Lane V/C Ratio	0.31	0.459	0.31	0.346	0.241	0.324
HCM Control Delay	12.9	15.3	11.7	13.3	11.7	11.6
HCM Lane LOS	B	C	B	B	B	B
HCM 95th-tile Q	1.3	2.4	1.3	1.5	0.9	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	152	21	199	121	52	50	576	208	60	599	33
Future Volume (veh/h)	21	152	21	199	121	52	50	576	208	60	599	33
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	21	152	21	199	121	52	50	576	39	60	599	6
Adj No. of Lanes	1	1	0	1	1	0	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	306	276	38	372	259	111	117	1000	447	130	1026	459
Arrive On Green	0.17	0.17	0.14	0.21	0.21	0.18	0.07	0.28	0.28	0.07	0.29	0.29
Sat Flow, veh/h	1774	1602	221	1774	1237	532	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	21	0	173	199	0	173	50	576	39	60	599	6
Grp Sat Flow(s),veh/h/ln	1774	0	1824	1774	0	1769	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.5	0.0	4.0	4.6	0.0	3.9	1.2	6.4	0.8	1.5	6.6	0.1
Cycle Q Clear(g_c), s	0.5	0.0	4.0	4.6	0.0	3.9	1.2	6.4	0.8	1.5	6.6	0.1
Prop In Lane	1.00		0.12	1.00		0.30	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	306	0	314	372	0	371	117	1000	447	130	1026	459
V/C Ratio(X)	0.07	0.00	0.55	0.54	0.00	0.47	0.43	0.58	0.09	0.46	0.58	0.01
Avail Cap(c_a), veh/h	1105	0	1136	1105	0	1102	136	1624	727	194	1740	779
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.9	0.0	17.4	16.1	0.0	16.1	20.5	14.1	12.1	20.3	13.9	11.6
Incr Delay (d2), s/veh	0.1	0.0	1.5	1.2	0.0	0.9	2.4	0.5	0.1	2.5	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	2.1	2.3	0.0	2.0	0.7	3.2	0.4	0.8	3.2	0.1
LnGrp Delay(d),s/veh	16.0	0.0	18.9	17.3	0.0	17.0	23.0	14.6	12.2	22.9	14.4	11.6
LnGrp LOS	B		B	B		B	C	B	B	C	B	B
Approach Vol, veh/h		194			372			665			665	
Approach Delay, s/veh		18.6			17.1			15.1			15.2	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.4	15.9		10.9	6.0	16.3		12.6
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	3.5	19.5		27.0	2.0	21.0		27.0
Max Q Clear Time (g_c+I1), s	3.5	8.4		6.0	3.2	8.6		6.6
Green Ext Time (p_c), s	0.0	2.9		1.0	0.0	3.1		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	15.9
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	21	21	50	834	813	33
Future Vol, veh/h	21	21	50	834	813	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	0	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	21	50	834	813	33

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1347	423	846	0	-	0
Stage 1	830	-	-	-	-	-
Stage 2	517	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	142	579	787	-	-	-
Stage 1	388	-	-	-	-	-
Stage 2	563	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	133	579	787	-	-	-
Mov Cap-2 Maneuver	258	-	-	-	-	-
Stage 1	363	-	-	-	-	-
Stage 2	563	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.4	0.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	787	-	357	-	-
HCM Lane V/C Ratio	0.064	-	0.118	-	-
HCM Control Delay (s)	9.9	-	16.4	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.2	-	0.4	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	69	61	93	53	95	17	1041	109	40	1136	42
Future Volume (veh/h)	21	69	61	93	53	95	17	1041	109	40	1136	42
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	21	69	0	93	53	95	17	1041	109	40	1136	42
Adj No. of Lanes	0	1	1	0	1	0	0	2	0	0	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	148	339	337	221	99	131	97	1785	185	119	1851	67
Arrive On Green	0.21	0.21	0.00	0.21	0.21	0.21	0.57	0.57	0.57	0.57	0.57	0.57
Sat Flow, veh/h	200	1592	1583	481	465	616	15	3117	323	49	3232	118
Grp Volume(v), veh/h	90	0	0	241	0	0	614	0	553	621	0	597
Grp Sat Flow(s),veh/h/ln	1793	0	1583	1562	0	0	1817	0	1638	1724	0	1674
Q Serve(g_s), s	0.0	0.0	0.0	4.3	0.0	0.0	0.0	0.0	9.1	0.0	0.0	9.9
Cycle Q Clear(g_c), s	1.7	0.0	0.0	5.9	0.0	0.0	8.8	0.0	9.1	9.0	0.0	9.9
Prop In Lane	0.23		1.00	0.39		0.39	0.03		0.20	0.06		0.07
Lane Grp Cap(c), veh/h	487	0	337	451	0	0	1129	0	938	1079	0	959
V/C Ratio(X)	0.18	0.00	0.00	0.53	0.00	0.00	0.54	0.00	0.59	0.58	0.00	0.62
Avail Cap(c_a), veh/h	1025	0	848	942	0	0	2542	0	2282	2371	0	2332
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.7	0.0	0.0	15.3	0.0	0.0	5.7	0.0	5.8	5.7	0.0	6.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	1.0	0.0	0.0	0.4	0.0	0.6	0.5	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.0	2.7	0.0	0.0	4.6	0.0	4.1	4.6	0.0	4.7
LnGrp Delay(d),s/veh	13.9	0.0	0.0	16.2	0.0	0.0	6.1	0.0	6.4	6.2	0.0	6.6
LnGrp LOS	B			B			A		A	A		A
Approach Vol, veh/h		90			241			1167			1218	
Approach Delay, s/veh		13.9			16.2			6.2			6.4	
Approach LOS		B			B			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		28.6		13.4		28.6		13.4
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		58.5		22.5		58.5		22.5
Max Q Clear Time (g_c+I1), s		11.1		3.7		11.9		7.9
Green Ext Time (p_c), s		11.0		0.4		12.1		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	7.5
HCM 2010 LOS	A

Intersection	
Intersection Delay, s/veh	14.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	308	148	127	11	150	7	72	71	24	12	104	176
Future Vol, veh/h	308	148	127	11	150	7	72	71	24	12	104	176
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	308	148	127	11	150	7	72	71	24	12	104	176
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	16.4	13.3	13.8	11.9
HCM LOS	C	B	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	43%	100%	0%	7%	10%	0%
Vol Thru, %	43%	0%	54%	89%	90%	0%
Vol Right, %	14%	0%	46%	4%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	167	308	275	168	116	176
LT Vol	72	308	0	11	12	0
Through Vol	71	0	148	150	104	0
RT Vol	24	0	127	7	0	176
Lane Flow Rate	167	308	275	168	116	176
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.332	0.584	0.458	0.323	0.227	0.308
Departure Headway (Hd)	7.157	6.826	5.99	6.929	7.059	6.292
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	499	527	597	516	506	567
Service Time	5.251	4.6	3.763	5.022	4.847	4.079
HCM Lane V/C Ratio	0.335	0.584	0.461	0.326	0.229	0.31
HCM Control Delay	13.8	18.8	13.8	13.3	11.9	11.9
HCM Lane LOS	B	C	B	B	B	B
HCM 95th-tile Q	1.4	3.7	2.4	1.4	0.9	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	248	31	124	94	94	12	538	283	116	650	52
Future Volume (veh/h)	22	248	31	124	94	94	12	538	283	116	650	52
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	22	248	31	124	94	94	12	538	0	116	650	25
Adj No. of Lanes	1	1	0	1	1	0	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	413	378	47	340	164	164	63	872	390	183	1113	498
Arrive On Green	0.23	0.23	0.20	0.19	0.19	0.16	0.04	0.25	0.00	0.10	0.31	0.31
Sat Flow, veh/h	1774	1624	203	1774	856	856	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	22	0	279	124	0	188	12	538	0	116	650	25
Grp Sat Flow(s),veh/h/ln	1774	0	1827	1774	0	1712	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.5	0.0	7.4	3.2	0.0	5.3	0.3	7.2	0.0	3.3	8.2	0.6
Cycle Q Clear(g_c), s	0.5	0.0	7.4	3.2	0.0	5.3	0.3	7.2	0.0	3.3	8.2	0.6
Prop In Lane	1.00		0.11	1.00		0.50	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	413	0	425	340	0	328	63	872	390	183	1113	498
V/C Ratio(X)	0.05	0.00	0.66	0.36	0.00	0.57	0.19	0.62	0.00	0.63	0.58	0.05
Avail Cap(c_a), veh/h	951	0	979	951	0	917	117	1364	610	183	1497	670
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.9	0.0	18.6	18.7	0.0	19.9	24.9	17.8	0.0	22.9	15.3	12.7
Incr Delay (d2), s/veh	0.1	0.0	1.7	0.7	0.0	1.6	1.5	0.7	0.0	6.9	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	3.9	1.6	0.0	2.7	0.2	3.6	0.0	2.0	4.0	0.3
LnGrp Delay(d),s/veh	15.9	0.0	20.3	19.3	0.0	21.4	26.4	18.5	0.0	29.7	15.8	12.7
LnGrp LOS	B		C	B		C	C	B		C	B	B
Approach Vol, veh/h		301			312			550			791	
Approach Delay, s/veh		20.0			20.6			18.7			17.7	
Approach LOS		B			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.5	16.1		15.4	4.9	19.7		13.2
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	4.0	19.0		27.0	2.0	21.0		27.0
Max Q Clear Time (g_c+I1), s	5.3	9.2		9.4	2.3	10.2		7.3
Green Ext Time (p_c), s	0.0	2.4		1.6	0.0	3.2		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	18.8
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	24	33	13	831	805	53
Future Vol, veh/h	24	33	13	831	805	53
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	0	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	33	13	831	805	53

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1274	429	858	0	-	0
Stage 1	832	-	-	-	-	-
Stage 2	442	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	159	574	779	-	-	-
Stage 1	388	-	-	-	-	-
Stage 2	615	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	156	574	779	-	-	-
Mov Cap-2 Maneuver	280	-	-	-	-	-
Stage 1	381	-	-	-	-	-
Stage 2	615	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.6	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	779	-	398	-	-
HCM Lane V/C Ratio	0.017	-	0.143	-	-
HCM Control Delay (s)	9.7	-	15.6	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	63	61	97	50	100	21	1023	106	57	941	11
Future Volume (veh/h)	23	63	61	97	50	100	21	1023	106	57	941	11
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	23	63	0	97	50	100	21	1023	106	57	941	11
Adj No. of Lanes	0	1	1	0	1	0	0	2	0	0	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	171	341	352	236	97	140	107	1707	175	152	1740	20
Arrive On Green	0.22	0.22	0.00	0.22	0.22	0.22	0.55	0.55	0.55	0.55	0.55	0.55
Sat Flow, veh/h	243	1536	1583	488	439	631	21	3115	319	91	3175	36
Grp Volume(v), veh/h	86	0	0	247	0	0	605	0	545	496	0	513
Grp Sat Flow(s),veh/h/ln	1780	0	1583	1558	0	0	1816	0	1639	1613	0	1689
Q Serve(g_s), s	0.0	0.0	0.0	4.1	0.0	0.0	0.0	0.0	8.8	0.0	0.0	7.7
Cycle Q Clear(g_c), s	1.5	0.0	0.0	5.6	0.0	0.0	8.5	0.0	8.8	6.4	0.0	7.7
Prop In Lane	0.27		1.00	0.39		0.40	0.03		0.19	0.11		0.02
Lane Grp Cap(c), veh/h	512	0	352	474	0	0	1091	0	898	987	0	926
V/C Ratio(X)	0.17	0.00	0.00	0.52	0.00	0.00	0.56	0.00	0.61	0.50	0.00	0.55
Avail Cap(c_a), veh/h	1131	0	950	1047	0	0	2684	0	2406	2289	0	2479
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.4	0.0	0.0	14.0	0.0	0.0	5.9	0.0	6.0	5.5	0.0	5.7
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.9	0.0	0.0	0.4	0.0	0.7	0.4	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.0	2.5	0.0	0.0	4.3	0.0	4.1	3.3	0.0	3.7
LnGrp Delay(d),s/veh	12.6	0.0	0.0	14.9	0.0	0.0	6.4	0.0	6.7	5.9	0.0	6.3
LnGrp LOS	B			B			A		A	A		A
Approach Vol, veh/h		86			247			1150			1009	
Approach Delay, s/veh		12.6			14.9			6.5			6.1	
Approach LOS		B			B			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		26.0		13.2		26.0		13.2
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		57.5		23.5		57.5		23.5
Max Q Clear Time (g_c+I1), s		10.8		3.5		9.7		7.6
Green Ext Time (p_c), s		10.7		0.4		9.4		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	7.4
HCM 2010 LOS	A

Intersection	
Intersection Delay, s/veh	12.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	214	130	47	23	137	21	35	84	42	20	104	185
Future Vol, veh/h	214	130	47	23	137	21	35	84	42	20	104	185
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	214	130	47	23	137	21	35	84	42	20	104	185
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	12.8	12.9	12.6	11.2
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	22%	100%	0%	13%	16%	0%
Vol Thru, %	52%	0%	73%	76%	84%	0%
Vol Right, %	26%	0%	27%	12%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	161	214	177	181	124	185
LT Vol	35	214	0	23	20	0
Through Vol	84	0	130	137	104	0
RT Vol	42	0	47	21	0	185
Lane Flow Rate	161	214	177	181	124	185
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.298	0.402	0.299	0.33	0.228	0.3
Departure Headway (Hd)	6.657	6.768	6.072	6.569	6.624	5.83
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	538	531	589	545	539	612
Service Time	4.734	4.532	3.835	4.643	4.393	3.599
HCM Lane V/C Ratio	0.299	0.403	0.301	0.332	0.23	0.302
HCM Control Delay	12.6	14	11.4	12.9	11.4	11.1
HCM Lane LOS	B	B	B	B	B	B
HCM 95th-tile Q	1.2	1.9	1.2	1.4	0.9	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	143	17	190	118	52	42	566	189	60	592	33
Future Volume (veh/h)	21	143	17	190	118	52	42	566	189	60	592	33
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	21	143	17	190	118	52	42	566	20	60	592	6
Adj No. of Lanes	1	1	0	1	1	0	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	292	269	32	368	254	112	109	995	445	132	1042	466
Arrive On Green	0.16	0.16	0.13	0.21	0.21	0.17	0.06	0.28	0.28	0.07	0.29	0.29
Sat Flow, veh/h	1774	1634	194	1774	1227	541	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	21	0	160	190	0	170	42	566	20	60	592	6
Grp Sat Flow(s),veh/h/ln	1774	0	1828	1774	0	1767	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.4	0.0	3.5	4.2	0.0	3.7	1.0	6.0	0.4	1.4	6.2	0.1
Cycle Q Clear(g_c), s	0.4	0.0	3.5	4.2	0.0	3.7	1.0	6.0	0.4	1.4	6.2	0.1
Prop In Lane	1.00		0.11	1.00		0.31	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	292	0	301	368	0	367	109	995	445	132	1042	466
V/C Ratio(X)	0.07	0.00	0.53	0.52	0.00	0.46	0.39	0.57	0.04	0.45	0.57	0.01
Avail Cap(c_a), veh/h	1147	0	1182	1147	0	1143	141	1686	754	201	1807	808
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.6	0.0	16.9	15.5	0.0	15.5	19.9	13.6	11.5	19.5	13.2	11.0
Incr Delay (d2), s/veh	0.1	0.0	1.5	1.1	0.0	0.9	2.2	0.5	0.0	2.4	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	1.9	2.2	0.0	1.9	0.6	3.0	0.2	0.8	3.1	0.1
LnGrp Delay(d),s/veh	15.7	0.0	18.4	16.6	0.0	16.4	22.1	14.1	11.6	22.0	13.7	11.0
LnGrp LOS	B		B	B		B	C	B	B	C	B	B
Approach Vol, veh/h		181			360			628			658	
Approach Delay, s/veh		18.1			16.5			14.5			14.4	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.3	15.4		10.3	5.7	16.0		12.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	3.5	19.5		27.0	2.0	21.0		27.0
Max Q Clear Time (g_c+I1), s	3.4	8.0		5.5	3.0	8.2		6.2
Green Ext Time (p_c), s	0.0	2.9		0.9	0.0	3.1		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	15.2
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	22	18	44	795	797	35
Future Vol, veh/h	22	18	44	795	797	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	0	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	18	44	795	797	35

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1301	416	832	0	-	0
Stage 1	815	-	-	-	-	-
Stage 2	486	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	153	585	796	-	-	-
Stage 1	396	-	-	-	-	-
Stage 2	584	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	145	585	796	-	-	-
Mov Cap-2 Maneuver	270	-	-	-	-	-
Stage 1	374	-	-	-	-	-
Stage 2	584	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.4	0.5	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	796	-	356	-	-
HCM Lane V/C Ratio	0.055	-	0.112	-	-
HCM Control Delay (s)	9.8	-	16.4	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.2	-	0.4	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	69	61	94	53	89	17	1031	110	38	1128	42
Future Volume (veh/h)	21	69	61	94	53	89	17	1031	110	38	1128	42
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	21	69	0	94	53	89	17	1031	110	38	1128	42
Adj No. of Lanes	0	1	1	0	1	0	0	2	0	0	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	150	334	333	227	99	124	99	1778	188	119	1853	68
Arrive On Green	0.21	0.21	0.00	0.21	0.21	0.21	0.57	0.57	0.57	0.57	0.57	0.57
Sat Flow, veh/h	202	1590	1583	500	473	589	16	3111	329	46	3244	119
Grp Volume(v), veh/h	90	0	0	236	0	0	610	0	548	617	0	591
Grp Sat Flow(s),veh/h/ln	1793	0	1583	1562	0	0	1818	0	1637	1734	0	1674
Q Serve(g_s), s	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	8.9	0.0	0.0	9.6
Cycle Q Clear(g_c), s	1.7	0.0	0.0	5.7	0.0	0.0	8.6	0.0	8.9	8.8	0.0	9.6
Prop In Lane	0.23		1.00	0.40		0.38	0.03		0.20	0.06		0.07
Lane Grp Cap(c), veh/h	484	0	333	450	0	0	1128	0	935	1084	0	957
V/C Ratio(X)	0.19	0.00	0.00	0.52	0.00	0.00	0.54	0.00	0.59	0.57	0.00	0.62
Avail Cap(c_a), veh/h	1045	0	865	961	0	0	2591	0	2325	2433	0	2378
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.5	0.0	0.0	15.0	0.0	0.0	5.6	0.0	5.7	5.7	0.0	5.8
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.9	0.0	0.0	0.4	0.0	0.6	0.5	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.0	2.6	0.0	0.0	4.4	0.0	4.1	4.4	0.0	4.4
LnGrp Delay(d),s/veh	13.7	0.0	0.0	16.0	0.0	0.0	6.0	0.0	6.3	6.1	0.0	6.5
LnGrp LOS	B			B			A		A	A		A
Approach Vol, veh/h		90			236			1158			1208	
Approach Delay, s/veh		13.7			16.0			6.1			6.3	
Approach LOS		B			B			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		28.0		13.2		28.0		13.2
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		58.5		22.5		58.5		22.5
Max Q Clear Time (g_c+I1), s		10.9		3.7		11.6		7.7
Green Ext Time (p_c), s		10.9		0.4		11.9		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	7.3
HCM 2010 LOS	A

Intersection	
Intersection Delay, s/veh	15.3
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	312	149	127	11	152	7	72	71	24	16	107	209
Future Vol, veh/h	312	149	127	11	152	7	72	71	24	16	107	209
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	312	149	127	11	152	7	72	71	24	16	107	209
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	17.4	13.9	14.2	12.7
HCM LOS	C	B	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	43%	100%	0%	6%	13%	0%
Vol Thru, %	43%	0%	54%	89%	87%	0%
Vol Right, %	14%	0%	46%	4%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	167	312	276	170	123	209
LT Vol	72	312	0	11	16	0
Through Vol	71	0	149	152	107	0
RT Vol	24	0	127	7	0	209
Lane Flow Rate	167	312	276	170	123	209
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.343	0.604	0.47	0.34	0.247	0.375
Departure Headway (Hd)	7.4	7.079	6.243	7.192	7.24	6.458
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	488	512	580	501	499	560
Service Time	5.422	4.779	3.943	5.221	4.94	4.158
HCM Lane V/C Ratio	0.342	0.609	0.476	0.339	0.246	0.373
HCM Control Delay	14.2	20	14.4	13.9	12.3	13
HCM Lane LOS	B	C	B	B	B	B
HCM 95th-tile Q	1.5	4	2.5	1.5	1	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	250	38	146	108	94	14	544	287	116	658	52
Future Volume (veh/h)	23	250	38	146	108	94	14	544	287	116	658	52
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	23	250	38	146	108	94	14	544	0	116	658	25
Adj No. of Lanes	1	1	0	1	1	0	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	419	374	57	354	183	160	64	867	388	178	1095	490
Arrive On Green	0.24	0.24	0.21	0.20	0.20	0.17	0.04	0.24	0.00	0.10	0.31	0.31
Sat Flow, veh/h	1774	1580	240	1774	920	801	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	23	0	288	146	0	202	14	544	0	116	658	25
Grp Sat Flow(s),veh/h/ln	1774	0	1820	1774	0	1721	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.5	0.0	7.9	3.9	0.0	5.9	0.4	7.5	0.0	3.4	8.6	0.6
Cycle Q Clear(g_c), s	0.5	0.0	7.9	3.9	0.0	5.9	0.4	7.5	0.0	3.4	8.6	0.6
Prop In Lane	1.00		0.13	1.00		0.47	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	419	0	430	354	0	343	64	867	388	178	1095	490
V/C Ratio(X)	0.05	0.00	0.67	0.41	0.00	0.59	0.22	0.63	0.00	0.65	0.60	0.05
Avail Cap(c_a), veh/h	923	0	947	923	0	895	113	1324	592	178	1453	650
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.2	0.0	19.1	19.1	0.0	20.2	25.7	18.5	0.0	23.7	16.1	13.3
Incr Delay (d2), s/veh	0.1	0.0	1.8	0.8	0.0	1.6	1.7	0.8	0.0	8.2	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	4.1	2.0	0.0	2.9	0.2	3.7	0.0	2.1	4.3	0.3
LnGrp Delay(d),s/veh	16.2	0.0	20.9	19.9	0.0	21.8	27.4	19.2	0.0	31.9	16.6	13.3
LnGrp LOS	B		C	B		C	C	B		C	B	B
Approach Vol, veh/h		311			348			558			799	
Approach Delay, s/veh		20.5			21.0			19.4			18.7	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.5	16.4		16.0	5.0	20.0		13.9
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	4.0	19.0		27.0	2.0	21.0		27.0
Max Q Clear Time (g_c+I1), s	5.4	9.5		9.9	2.4	10.6		7.9
Green Ext Time (p_c), s	0.0	2.4		1.7	0.0	3.2		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	19.6
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	24	40	16	843	827	53
Future Vol, veh/h	24	40	16	843	827	53
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	0	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	40	16	843	827	53

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1308	440	880	0	-	0
Stage 1	854	-	-	-	-	-
Stage 2	454	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	151	565	764	-	-	-
Stage 1	377	-	-	-	-	-
Stage 2	606	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	148	565	764	-	-	-
Mov Cap-2 Maneuver	271	-	-	-	-	-
Stage 1	369	-	-	-	-	-
Stage 2	606	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.6	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	764	-	402	-	-
HCM Lane V/C Ratio	0.021	-	0.159	-	-
HCM Control Delay (s)	9.8	-	15.6	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.6	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	63	61	97	50	103	21	1030	106	63	953	11
Future Volume (veh/h)	23	63	61	97	50	103	21	1030	106	63	953	11
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	23	63	0	97	50	103	21	1030	106	63	953	11
Adj No. of Lanes	0	1	1	0	1	0	0	2	0	0	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	170	343	354	234	97	144	106	1711	174	158	1720	19
Arrive On Green	0.22	0.22	0.00	0.22	0.22	0.22	0.55	0.55	0.55	0.55	0.55	0.55
Sat Flow, veh/h	245	1534	1583	482	435	642	21	3116	317	102	3133	35
Grp Volume(v), veh/h	86	0	0	250	0	0	609	0	548	500	0	527
Grp Sat Flow(s),veh/h/ln	1780	0	1583	1558	0	0	1816	0	1639	1581	0	1689
Q Serve(g_s), s	0.0	0.0	0.0	4.2	0.0	0.0	0.0	0.0	9.0	0.0	0.0	8.1
Cycle Q Clear(g_c), s	1.5	0.0	0.0	5.8	0.0	0.0	8.7	0.0	9.0	6.6	0.0	8.1
Prop In Lane	0.27		1.00	0.39		0.41	0.03		0.19	0.13		0.02
Lane Grp Cap(c), veh/h	513	0	354	475	0	0	1091	0	900	970	0	927
V/C Ratio(X)	0.17	0.00	0.00	0.53	0.00	0.00	0.56	0.00	0.61	0.52	0.00	0.57
Avail Cap(c_a), veh/h	1119	0	940	1036	0	0	2654	0	2380	2217	0	2453
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.5	0.0	0.0	14.1	0.0	0.0	6.0	0.0	6.1	5.5	0.0	5.9
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.9	0.0	0.0	0.4	0.0	0.7	0.4	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.0	2.6	0.0	0.0	4.5	0.0	4.1	3.5	0.0	3.8
LnGrp Delay(d),s/veh	12.7	0.0	0.0	15.0	0.0	0.0	6.4	0.0	6.7	5.9	0.0	6.4
LnGrp LOS	B			B			A		A	A		A
Approach Vol, veh/h		86			250			1157			1027	
Approach Delay, s/veh		12.7			15.0			6.6			6.2	
Approach LOS		B			B			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		26.2		13.4		26.2		13.4
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		57.5		23.5		57.5		23.5
Max Q Clear Time (g_c+I1), s		11.0		3.5		10.1		7.8
Green Ext Time (p_c), s		10.8		0.4		9.7		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	7.5
HCM 2010 LOS	A

Intersection	
Intersection Delay, s/veh	12.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	240	133	47	26	138	21	35	86	42	23	104	195
Future Vol, veh/h	240	133	47	26	138	21	35	86	42	23	104	195
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	240	133	47	26	138	21	35	86	42	23	104	195
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	13.8	13.3	12.9	11.6
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	21%	100%	0%	14%	18%	0%
Vol Thru, %	53%	0%	74%	75%	82%	0%
Vol Right, %	26%	0%	26%	11%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	163	240	180	185	127	195
LT Vol	35	240	0	26	23	0
Through Vol	86	0	133	138	104	0
RT Vol	42	0	47	21	0	195
Lane Flow Rate	163	240	180	185	127	195
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.308	0.457	0.308	0.344	0.238	0.322
Departure Headway (Hd)	6.803	6.848	6.154	6.696	6.756	5.951
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	525	523	581	535	528	601
Service Time	4.89	4.619	3.924	4.779	4.535	3.73
HCM Lane V/C Ratio	0.31	0.459	0.31	0.346	0.241	0.324
HCM Control Delay	12.9	15.3	11.7	13.3	11.7	11.6
HCM Lane LOS	B	C	B	B	B	B
HCM 95th-tile Q	1.3	2.4	1.3	1.5	0.9	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	152	21	200	121	52	50	577	209	60	600	33
Future Volume (veh/h)	21	152	21	200	121	52	50	577	209	60	600	33
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	21	152	21	200	121	52	50	577	40	60	600	6
Adj No. of Lanes	1	1	0	1	1	0	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	306	276	38	372	260	112	117	1000	447	130	1026	459
Arrive On Green	0.17	0.17	0.14	0.21	0.21	0.18	0.07	0.28	0.28	0.07	0.29	0.29
Sat Flow, veh/h	1774	1602	221	1774	1237	532	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	21	0	173	200	0	173	50	577	40	60	600	6
Grp Sat Flow(s),veh/h/ln	1774	0	1824	1774	0	1769	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.5	0.0	4.0	4.6	0.0	4.0	1.2	6.4	0.9	1.5	6.6	0.1
Cycle Q Clear(g_c), s	0.5	0.0	4.0	4.6	0.0	4.0	1.2	6.4	0.9	1.5	6.6	0.1
Prop In Lane	1.00		0.12	1.00		0.30	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	306	0	314	372	0	371	117	1000	447	130	1026	459
V/C Ratio(X)	0.07	0.00	0.55	0.54	0.00	0.47	0.43	0.58	0.09	0.46	0.58	0.01
Avail Cap(c_a), veh/h	1103	0	1134	1103	0	1100	135	1622	726	194	1738	777
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.9	0.0	17.4	16.1	0.0	16.1	20.6	14.1	12.1	20.4	13.9	11.6
Incr Delay (d2), s/veh	0.1	0.0	1.5	1.2	0.0	0.9	2.4	0.5	0.1	2.5	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	2.1	2.3	0.0	2.0	0.7	3.2	0.4	0.8	3.3	0.1
LnGrp Delay(d),s/veh	16.0	0.0	18.9	17.3	0.0	17.0	23.0	14.6	12.2	22.9	14.4	11.6
LnGrp LOS	B		B	B		B	C	B	B	C	B	B
Approach Vol, veh/h		194			373			667			666	
Approach Delay, s/veh		18.6			17.2			15.1			15.2	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.4	15.9		10.9	6.0	16.3		12.6
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	3.5	19.5		27.0	2.0	21.0		27.0
Max Q Clear Time (g_c+I1), s	3.5	8.4		6.0	3.2	8.6		6.6
Green Ext Time (p_c), s	0.0	2.9		1.0	0.0	3.1		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	15.9
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	22	22	52	834	813	35
Future Vol, veh/h	22	22	52	834	813	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	0	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	22	52	834	813	35

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1352	424	848	0	-	0
Stage 1	831	-	-	-	-	-
Stage 2	521	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	141	579	785	-	-	-
Stage 1	388	-	-	-	-	-
Stage 2	561	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	132	579	785	-	-	-
Mov Cap-2 Maneuver	257	-	-	-	-	-
Stage 1	362	-	-	-	-	-
Stage 2	561	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.5	0.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	785	-	356	-	-
HCM Lane V/C Ratio	0.066	-	0.124	-	-
HCM Control Delay (s)	9.9	-	16.5	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.2	-	0.4	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	69	61	94	53	96	17	1041	110	42	1136	42
Future Volume (veh/h)	21	69	61	94	53	96	17	1041	110	42	1136	42
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	21	69	0	94	53	96	17	1041	110	42	1136	42
Adj No. of Lanes	0	1	1	0	1	0	0	2	0	0	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	148	341	339	221	99	132	96	1785	187	121	1845	67
Arrive On Green	0.21	0.21	0.00	0.21	0.21	0.21	0.57	0.57	0.57	0.57	0.57	0.57
Sat Flow, veh/h	200	1593	1583	483	461	617	15	3114	326	52	3219	117
Grp Volume(v), veh/h	90	0	0	243	0	0	615	0	553	620	0	600
Grp Sat Flow(s),veh/h/ln	1793	0	1583	1561	0	0	1817	0	1638	1715	0	1674
Q Serve(g_s), s	0.0	0.0	0.0	4.3	0.0	0.0	0.0	0.0	9.2	0.0	0.0	10.1
Cycle Q Clear(g_c), s	1.7	0.0	0.0	6.0	0.0	0.0	8.9	0.0	9.2	9.0	0.0	10.1
Prop In Lane	0.23		1.00	0.39		0.40	0.03		0.20	0.07		0.07
Lane Grp Cap(c), veh/h	489	0	339	452	0	0	1129	0	939	1074	0	960
V/C Ratio(X)	0.18	0.00	0.00	0.54	0.00	0.00	0.54	0.00	0.59	0.58	0.00	0.62
Avail Cap(c_a), veh/h	1018	0	842	935	0	0	2524	0	2264	2339	0	2315
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.7	0.0	0.0	15.4	0.0	0.0	5.8	0.0	5.8	5.8	0.0	6.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	1.0	0.0	0.0	0.4	0.0	0.6	0.5	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.0	2.8	0.0	0.0	4.6	0.0	4.1	4.6	0.0	4.7
LnGrp Delay(d),s/veh	13.9	0.0	0.0	16.4	0.0	0.0	6.2	0.0	6.4	6.3	0.0	6.7
LnGrp LOS	B			B			A		A	A		A
Approach Vol, veh/h		90			243			1168			1220	
Approach Delay, s/veh		13.9			16.4			6.3			6.5	
Approach LOS		B			B			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		28.8		13.6		28.8		13.6
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		58.5		22.5		58.5		22.5
Max Q Clear Time (g_c+I1), s		11.2		3.7		12.1		8.0
Green Ext Time (p_c), s		11.0		0.4		12.2		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	7.5
HCM 2010 LOS	A

Intersection	
Intersection Delay, s/veh	15.4
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	313	149	127	11	152	7	72	71	24	16	107	209
Future Vol, veh/h	313	149	127	11	152	7	72	71	24	16	107	209
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	313	149	127	11	152	7	72	71	24	16	107	209
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	17.6	13.9	14.3	12.7
HCM LOS	C	B	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	43%	100%	0%	6%	13%	0%
Vol Thru, %	43%	0%	54%	89%	87%	0%
Vol Right, %	14%	0%	46%	4%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	167	313	276	170	123	209
LT Vol	72	313	0	11	16	0
Through Vol	71	0	149	152	107	0
RT Vol	24	0	127	7	0	209
Lane Flow Rate	167	313	276	170	123	209
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.343	0.614	0.478	0.34	0.247	0.375
Departure Headway (Hd)	7.403	7.065	6.229	7.196	7.243	6.461
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	486	513	580	500	498	558
Service Time	5.44	4.779	3.943	5.233	4.961	4.179
HCM Lane V/C Ratio	0.344	0.61	0.476	0.34	0.247	0.375
HCM Control Delay	14.3	20.4	14.5	13.9	12.3	13
HCM Lane LOS	B	C	B	B	B	B
HCM 95th-tile Q	1.5	4.1	2.6	1.5	1	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	251	41	146	108	94	15	544	287	116	658	53
Future Volume (veh/h)	25	251	41	146	108	94	15	544	287	116	658	53
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	25	251	41	146	108	94	15	544	0	116	658	26
Adj No. of Lanes	1	1	0	1	1	0	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	424	373	61	353	183	159	65	865	387	177	1090	487
Arrive On Green	0.24	0.24	0.21	0.20	0.20	0.17	0.04	0.24	0.00	0.10	0.31	0.31
Sat Flow, veh/h	1774	1562	255	1774	920	801	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	25	0	292	146	0	202	15	544	0	116	658	26
Grp Sat Flow(s),veh/h/ln	1774	0	1818	1774	0	1721	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.6	0.0	8.0	4.0	0.0	5.9	0.5	7.6	0.0	3.5	8.7	0.6
Cycle Q Clear(g_c), s	0.6	0.0	8.0	4.0	0.0	5.9	0.5	7.6	0.0	3.5	8.7	0.6
Prop In Lane	1.00		0.14	1.00		0.47	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	424	0	434	353	0	343	65	865	387	177	1090	487
V/C Ratio(X)	0.06	0.00	0.67	0.41	0.00	0.59	0.23	0.63	0.00	0.65	0.60	0.05
Avail Cap(c_a), veh/h	918	0	941	918	0	891	113	1318	589	177	1446	647
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.2	0.0	19.1	19.3	0.0	20.3	25.8	18.6	0.0	23.9	16.2	13.4
Incr Delay (d2), s/veh	0.1	0.0	1.8	0.8	0.0	1.6	1.8	0.8	0.0	8.4	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	4.2	2.0	0.0	2.9	0.3	3.8	0.0	2.1	4.3	0.3
LnGrp Delay(d),s/veh	16.2	0.0	20.9	20.0	0.0	22.0	27.6	19.3	0.0	32.2	16.7	13.5
LnGrp LOS	B		C	C		C	C	B		C	B	B
Approach Vol, veh/h		317			348			559			800	
Approach Delay, s/veh		20.6			21.2			19.6			18.9	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.5	16.5		16.2	5.0	20.0		14.0
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	4.0	19.0		27.0	2.0	21.0		27.0
Max Q Clear Time (g_c+I1), s	5.5	9.6		10.0	2.5	10.7		7.9
Green Ext Time (p_c), s	0.0	2.4		1.7	0.0	3.2		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	19.7
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	24	40	16	844	830	53
Future Vol, veh/h	24	40	16	844	830	53
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	0	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	40	16	844	830	53

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1311	442	883	0	-	0
Stage 1	857	-	-	-	-	-
Stage 2	454	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	150	563	762	-	-	-
Stage 1	376	-	-	-	-	-
Stage 2	606	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	147	563	762	-	-	-
Mov Cap-2 Maneuver	270	-	-	-	-	-
Stage 1	368	-	-	-	-	-
Stage 2	606	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.7	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	762	-	400	-	-
HCM Lane V/C Ratio	0.021	-	0.16	-	-
HCM Control Delay (s)	9.8	-	15.7	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.6	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	63	61	97	50	103	21	1030	106	63	955	11
Future Volume (veh/h)	23	63	61	97	50	103	21	1030	106	63	955	11
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	23	63	0	97	50	103	21	1030	106	63	955	11
Adj No. of Lanes	0	1	1	0	1	0	0	2	0	0	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	170	343	354	234	97	144	106	1711	174	158	1720	19
Arrive On Green	0.22	0.22	0.00	0.22	0.22	0.22	0.55	0.55	0.55	0.55	0.55	0.55
Sat Flow, veh/h	246	1534	1583	482	435	642	21	3116	317	101	3134	35
Grp Volume(v), veh/h	86	0	0	250	0	0	609	0	548	501	0	528
Grp Sat Flow(s),veh/h/ln	1780	0	1583	1558	0	0	1815	0	1639	1581	0	1689
Q Serve(g_s), s	0.0	0.0	0.0	4.2	0.0	0.0	0.0	0.0	9.0	0.0	0.0	8.1
Cycle Q Clear(g_c), s	1.5	0.0	0.0	5.8	0.0	0.0	8.7	0.0	9.0	6.6	0.0	8.1
Prop In Lane	0.27		1.00	0.39		0.41	0.03		0.19	0.13		0.02
Lane Grp Cap(c), veh/h	513	0	354	475	0	0	1091	0	900	970	0	927
V/C Ratio(X)	0.17	0.00	0.00	0.53	0.00	0.00	0.56	0.00	0.61	0.52	0.00	0.57
Avail Cap(c_a), veh/h	1119	0	940	1036	0	0	2654	0	2380	2218	0	2452
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.5	0.0	0.0	14.1	0.0	0.0	6.0	0.0	6.1	5.5	0.0	5.9
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.9	0.0	0.0	0.4	0.0	0.7	0.4	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.0	2.6	0.0	0.0	4.5	0.0	4.1	3.5	0.0	3.8
LnGrp Delay(d),s/veh	12.7	0.0	0.0	15.0	0.0	0.0	6.4	0.0	6.7	5.9	0.0	6.4
LnGrp LOS	B			B			A		A	A		A
Approach Vol, veh/h		86			250			1157			1029	
Approach Delay, s/veh		12.7			15.0			6.6			6.2	
Approach LOS		B			B			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		26.2		13.4		26.2		13.4
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		57.5		23.5		57.5		23.5
Max Q Clear Time (g_c+I1), s		11.0		3.5		10.1		7.8
Green Ext Time (p_c), s		10.8		0.4		9.8		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	7.5
HCM 2010 LOS	A

Intersection	
Intersection Delay, s/veh	12.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	240	133	47	26	138	21	35	86	42	23	104	196
Future Vol, veh/h	240	133	47	26	138	21	35	86	42	23	104	196
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	240	133	47	26	138	21	35	86	42	23	104	196
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	13.8	13.3	12.9	11.6
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	21%	100%	0%	14%	18%	0%
Vol Thru, %	53%	0%	74%	75%	82%	0%
Vol Right, %	26%	0%	26%	11%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	163	240	180	185	127	196
LT Vol	35	240	0	26	23	0
Through Vol	86	0	133	138	104	0
RT Vol	42	0	47	21	0	196
Lane Flow Rate	163	240	180	185	127	196
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.308	0.457	0.308	0.344	0.238	0.324
Departure Headway (Hd)	6.807	6.852	6.159	6.7	6.758	5.953
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	525	523	581	533	528	600
Service Time	4.893	4.622	3.928	4.782	4.535	3.73
HCM Lane V/C Ratio	0.31	0.459	0.31	0.347	0.241	0.327
HCM Control Delay	12.9	15.3	11.7	13.3	11.7	11.6
HCM Lane LOS	B	C	B	B	B	B
HCM 95th-tile Q	1.3	2.4	1.3	1.5	0.9	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	152	22	200	122	52	53	577	209	60	600	35
Future Volume (veh/h)	22	152	22	200	122	52	53	577	209	60	600	35
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	22	152	22	200	122	52	53	577	40	60	600	8
Adj No. of Lanes	1	1	0	1	1	0	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	307	275	40	372	260	111	121	1005	450	130	1023	458
Arrive On Green	0.17	0.17	0.14	0.21	0.21	0.18	0.07	0.28	0.28	0.07	0.29	0.29
Sat Flow, veh/h	1774	1592	230	1774	1241	529	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	22	0	174	200	0	174	53	577	40	60	600	8
Grp Sat Flow(s),veh/h/ln	1774	0	1822	1774	0	1769	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.5	0.0	4.0	4.6	0.0	4.0	1.3	6.4	0.9	1.5	6.7	0.2
Cycle Q Clear(g_c), s	0.5	0.0	4.0	4.6	0.0	4.0	1.3	6.4	0.9	1.5	6.7	0.2
Prop In Lane	1.00		0.13	1.00		0.30	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	307	0	315	372	0	371	121	1005	450	130	1023	458
V/C Ratio(X)	0.07	0.00	0.55	0.54	0.00	0.47	0.44	0.57	0.09	0.46	0.59	0.02
Avail Cap(c_a), veh/h	1097	0	1126	1097	0	1094	135	1612	721	192	1727	773
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.0	0.0	17.5	16.2	0.0	16.2	20.6	14.1	12.1	20.5	14.0	11.7
Incr Delay (d2), s/veh	0.1	0.0	1.5	1.2	0.0	0.9	2.5	0.5	0.1	2.5	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	2.2	2.4	0.0	2.0	0.7	3.2	0.4	0.8	3.3	0.1
LnGrp Delay(d),s/veh	16.1	0.0	19.0	17.4	0.0	17.1	23.1	14.6	12.2	23.0	14.6	11.7
LnGrp LOS	B		B	B		B	C	B	B	C	B	B
Approach Vol, veh/h		196			374			670			668	
Approach Delay, s/veh		18.7			17.3			15.2			15.3	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.4	16.1		11.0	6.1	16.3		12.7
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	3.5	19.5		27.0	2.0	21.0		27.0
Max Q Clear Time (g_c+I1), s	3.5	8.4		6.0	3.3	8.7		6.6
Green Ext Time (p_c), s	0.0	2.9		1.0	0.0	3.1		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	16.0
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	22	22	52	837	813	35
Future Vol, veh/h	22	22	52	837	813	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	0	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	22	52	837	813	35

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1354	424	848	0	-	0
Stage 1	831	-	-	-	-	-
Stage 2	523	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	141	579	785	-	-	-
Stage 1	388	-	-	-	-	-
Stage 2	559	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	132	579	785	-	-	-
Mov Cap-2 Maneuver	257	-	-	-	-	-
Stage 1	362	-	-	-	-	-
Stage 2	559	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.5	0.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	785	-	356	-	-
HCM Lane V/C Ratio	0.066	-	0.124	-	-
HCM Control Delay (s)	9.9	-	16.5	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.2	-	0.4	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	69	61	94	53	96	17	1043	110	42	1137	42
Future Volume (veh/h)	21	69	61	94	53	96	17	1043	110	42	1137	42
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	21	69	0	94	53	96	17	1043	110	42	1137	42
Adj No. of Lanes	0	1	1	0	1	0	0	2	0	0	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	148	341	339	221	99	132	96	1786	186	121	1846	67
Arrive On Green	0.21	0.21	0.00	0.21	0.21	0.21	0.57	0.57	0.57	0.57	0.57	0.57
Sat Flow, veh/h	200	1593	1583	483	461	617	15	3114	325	52	3219	117
Grp Volume(v), veh/h	90	0	0	243	0	0	616	0	554	621	0	600
Grp Sat Flow(s),veh/h/ln	1793	0	1583	1561	0	0	1817	0	1638	1714	0	1674
Q Serve(g_s), s	0.0	0.0	0.0	4.4	0.0	0.0	0.0	0.0	9.2	0.0	0.0	10.1
Cycle Q Clear(g_c), s	1.7	0.0	0.0	6.0	0.0	0.0	8.9	0.0	9.2	9.0	0.0	10.1
Prop In Lane	0.23		1.00	0.39		0.40	0.03		0.20	0.07		0.07
Lane Grp Cap(c), veh/h	489	0	339	452	0	0	1130	0	939	1074	0	960
V/C Ratio(X)	0.18	0.00	0.00	0.54	0.00	0.00	0.55	0.00	0.59	0.58	0.00	0.63
Avail Cap(c_a), veh/h	1017	0	841	934	0	0	2521	0	2262	2336	0	2313
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.7	0.0	0.0	15.4	0.0	0.0	5.8	0.0	5.8	5.8	0.0	6.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	1.0	0.0	0.0	0.4	0.0	0.6	0.5	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.0	2.8	0.0	0.0	4.6	0.0	4.2	4.6	0.0	4.7
LnGrp Delay(d),s/veh	13.9	0.0	0.0	16.4	0.0	0.0	6.2	0.0	6.4	6.3	0.0	6.7
LnGrp LOS	B			B			A		A	A		A
Approach Vol, veh/h		90			243			1170			1221	
Approach Delay, s/veh		13.9			16.4			6.3			6.5	
Approach LOS		B			B			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		28.8		13.6		28.8		13.6
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		58.5		22.5		58.5		22.5
Max Q Clear Time (g_c+I1), s		11.2		3.7		12.1		8.0
Green Ext Time (p_c), s		11.0		0.4		12.2		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	7.5
HCM 2010 LOS	A

Appendix C
List of Background Projects

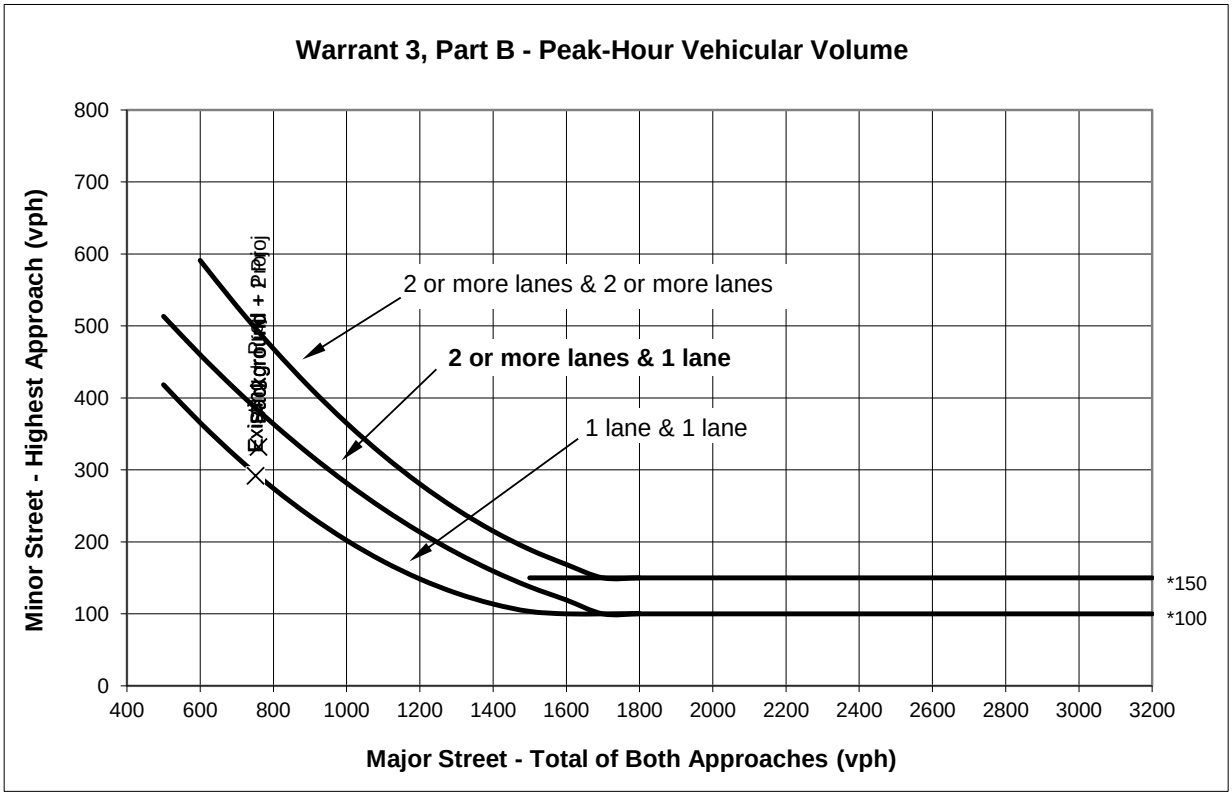
List of Background Projects

Project Name
Adrian Court
1499 Bayshore Highway
920 Bayswater Avenue
Burlingame Point
225 California Drive
250 California Drive
Carolan Avenue/Rollins Road Multi-Family Residential Development
1128-1132 Douglas Avenue
1431 El Camino Real
1457 El Camino Real
1509 El Camino Real
1433 Floribunda Avenue
988 Howard Avenue
240 Lorton Avenue
1491-1493 Oak Grove Avenue
21 Park Road
1095 Rollins Road
1600 Trousdale Drive
Village at Burlingame

Appendix D
Signal Warrant Analysis

Carolan Avenue and Oak Grove Avenue

Carolan Avenue and Oak Grove Avenue **AM PEAK PERIOD**



Source: Figure 4C-3 *California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2010 Edition, as amended for use in California)* .

* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

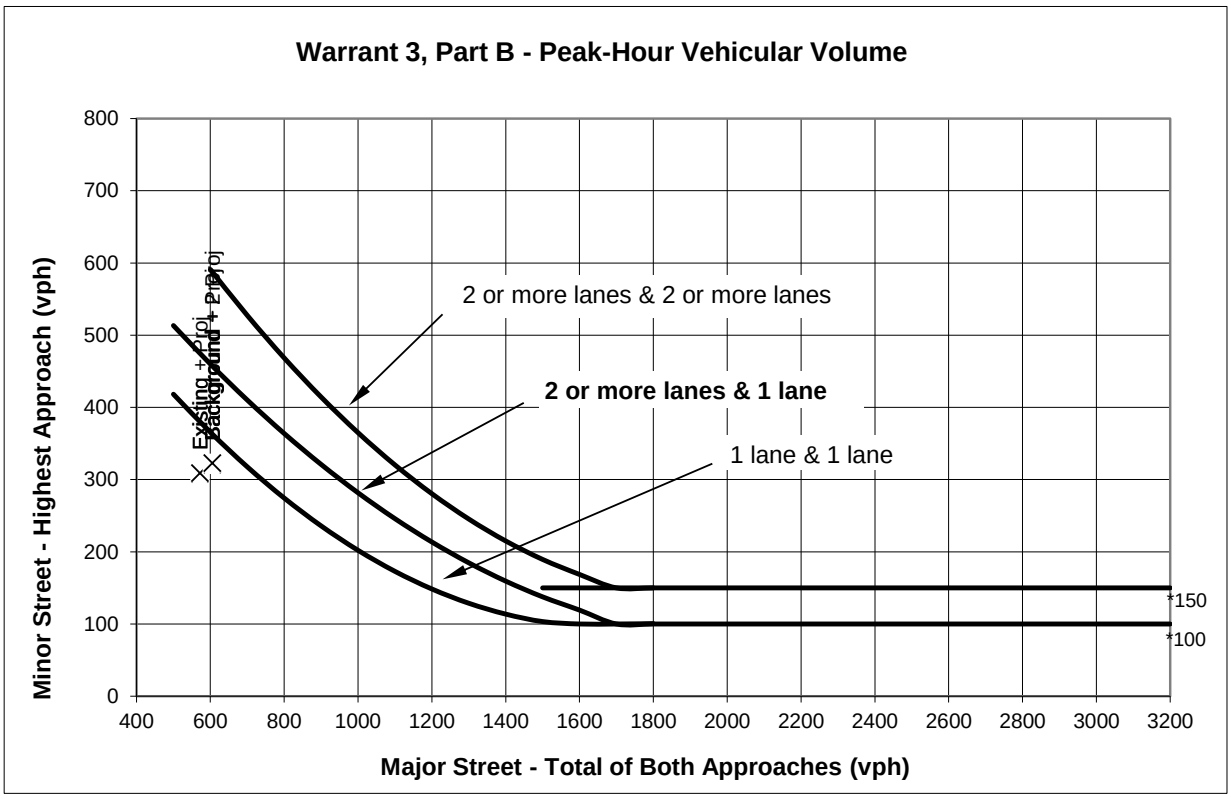
Warrant 3, Part B - Peak-Hour Vehicular Volume

		Approach Lanes		AM PEAK PERIOD							
		One	2 or More	Existing	Existing + Proj	Background	Background + Proj	Background + 2 Proj			
Major Street - Both Approaches	Oak Grove Avenue	X		750	751	757	758	759			
Minor Street - Highest Approach	Carolan Avenue	X		292	292	332	332	332			
Signal Warranted Based on Part B - Peak-Hour Volumes?				**Yes**	**Yes**	**Yes**	**Yes**	**Yes**			

*Warrant is satisfied if plotted points fall above the appropriate curve in graph above.
Note 1: Right turn volume was removed from the minor WB approach.

Carolan Avenue and Oak Grove Avenue

Carolan Avenue and Oak Grove Avenue **PM PEAK HOUR**



Source: Figure 4C-3 *California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2010 Edition, as amended for use in California)* .

* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

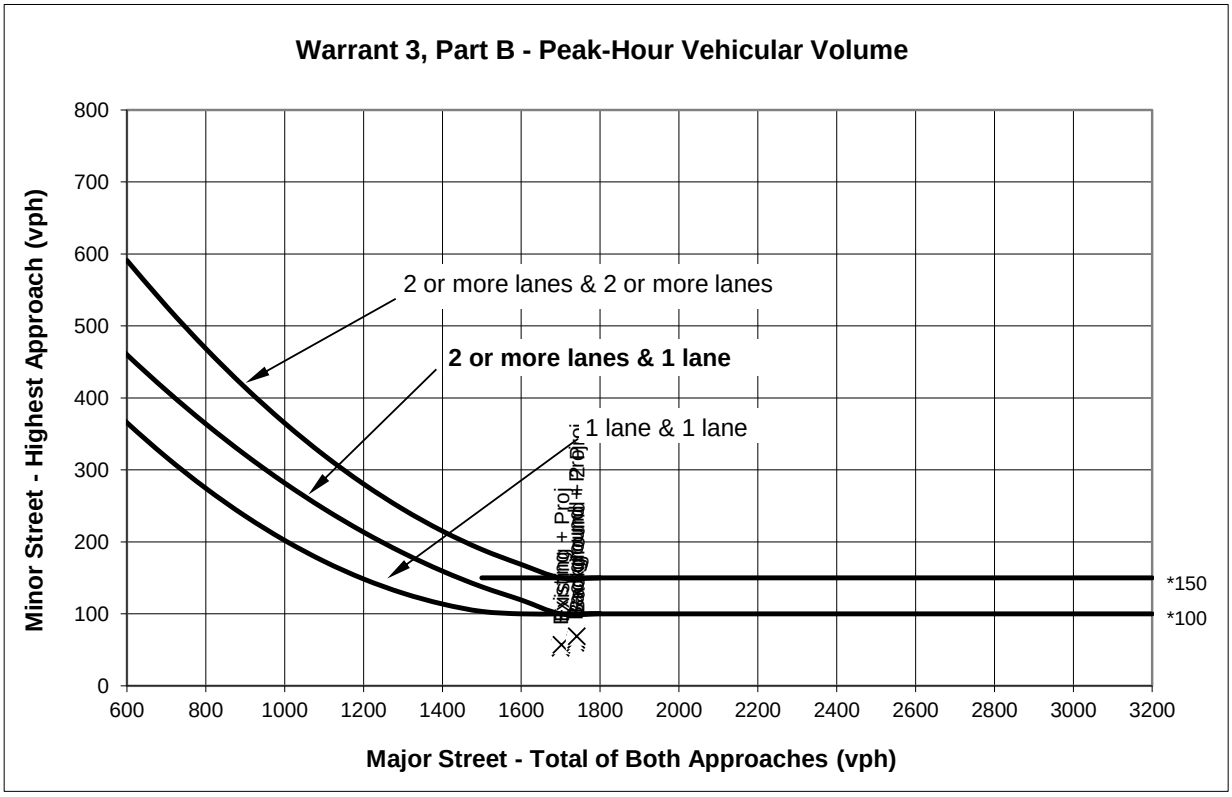
Warrant 3, Part B - Peak-Hour Vehicular Volume

		Approach Lanes		PM PEAK HOUR							
		One	2 or More	Existing	Existing + Proj	Background	Background + Proj	Background + 2 Proj			
Major Street - Both Approaches	Oak Grove Avenue	X		572	572	605	605	605			
Minor Street - Highest Approach	Carolan Avenue	X		308	309	321	322	323			
Signal Warranted Based on Part B - Peak-Hour Volumes?				**No**	**No**	**No**	**No**	**No**			

*Warrant is satisfied if plotted points fall above the appropriate curve in graph above.
Note 1: Right turn volume was removed from the minor WB approach.

Floribunda Avenue and California Drive

Floribunda Avenue and California Drive **AM PEAK PERIOD**



Source: Figure 4C-3 *California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2010 Edition, as amended for use in California)* .

* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

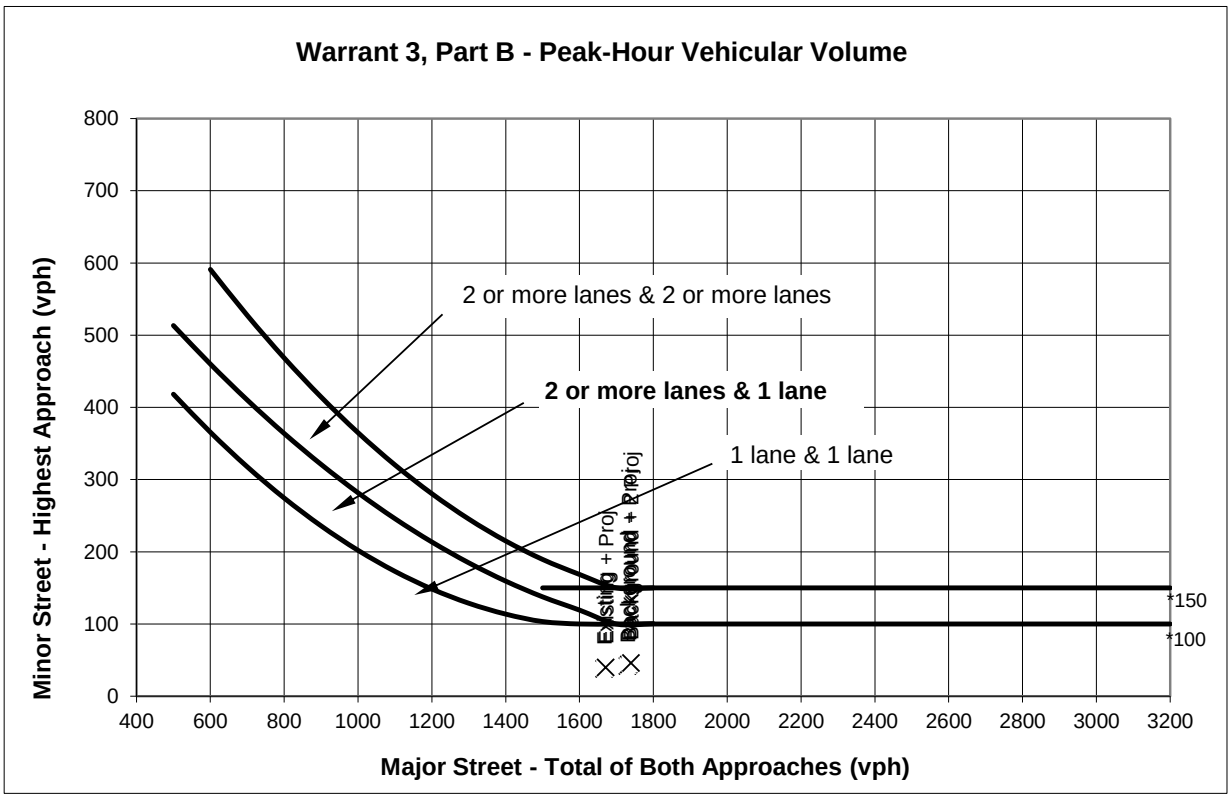
Warrant 3, Part B - Peak-Hour Vehicular Volume

		AM PEAK PERIOD									
		Approach Lanes		Existing	Existing + Proj	Background	Background + Proj	Background + 2 Proj			
		One	2 or More								
Major Street - Both Approaches	California Drive		X	1700	1702	1737	1739	1741			
Minor Street - Highest Approach	Floribunda Avenue	X		53	57	60	64	69			
Signal Warranted Based on Part B - Peak-Hour Volumes?				**No**	**No**	**No**	**No**	**No**			

*Warrant is satisfied if plotted points fall above the appropriate curve in graph above.
Note 1: Right turn volume was removed from the minor WB approach.

Floribunda Avenue and California Drive

Floribunda Avenue and California Drive **PM PEAK HOUR**



Source: Figure 4C-3 *California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2010 Edition, as amended for use in California)* .

* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Warrant 3, Part B - Peak-Hour Vehicular Volume

		Approach Lanes		PM PEAK HOUR							
		One	2 or More	Existing	Existing + Proj	Background	Background + Proj	Background + 2 Proj			
Major Street - Both Approaches	California Drive		X	1667	1671	1730	1734	1739			
Minor Street - Highest Approach	Floribunda Avenue	X		38	40	42	44	46			
Signal Warranted Based on Part B - Peak-Hour Volumes?				**No**	**No**	**No**	**No**	**No**			

*Warrant is satisfied if plotted points fall above the appropriate curve in graph above.
Note 1: Right turn volume was removed from the minor WB approach.